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ABSTRACT

The met and unmet needs of foreign students from developing countries in the United States were investigated. In addition, an attempt was made to assess whether the self-perceived needs of Agency for International Development (AID) sponsored students are different from or similar to those of other foreign students, both sponsored and nonsponsored. After pretesting of the research design at Iowa State University, a national survey was conducted in 1979. Nearly 1,900 students from 30 universities responded to the questionnaire, and this sample represented 102 nations, excluding North America, Europe (except Turkey and Portugal), and Japan. In every category of needs, needs were not satisfied to the level of students' expectations. Needs for practical experience (work experience and opportunities to apply knowledge), and anticipated post-return needs for both material rewards and professional opportunities and facilities were among the least well met. Financial needs and prereturn information needs were also among the least well met, but were considered to be less problematic since they can more easily be solved. Among the 24 categories of needs, information needs were best analyzed in terms of a number of selected personal characteristics of the students: regions of the world from which they came, major and whether or not they had jobs waiting in their countries. Several other characteristics were also analyzed in relation to need composites: school size, prestige accorded to one's country, age, marital status, length of stay, orientation, and previous international experience. Based on the results, a profile of a student who is likely to be most satisfied is presented. A bibliography is appended. (SW)

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Needs of Foreign Students from Developing Nations at U.S. Colleges and Universities

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by
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About NAFSA

The National Association for Foreign Student Affairs (NAFSA) is a professional association of institutions and individuals committed to international educational interchange. Its membership includes public and private educational institutions, private organizations, and individuals, both employees and volunteers, who work with students and scholars either coming to the United States from abroad or going from the United States to other countries. The Association serves as a source of professional training, as a guide to standards of performance, and as a spokesman for international educational exchange programs in government and educational circles. The Association consists of five professional sections: Council of Advisers to Foreign Students and Scholars (CAFSS), Admissions Section (ADSEC), Association of Teachers of English as a Second Language (ATESL), Community Section (COMSEC), and Section on U.S. Students Abroad (SECUSSA).

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PREFACE

The National Association for Foreign Student Affairs (NAFSA), under a contract with the Agency for International Development (A.I.D.), commissioned a national study to assess the needs of foreign students from developing nations who were studying in academic degree programs at U.S. colleges and universities. The study was initiated in April 1978, under a subcontract with the Department of Sociology and Anthropology of Iowa State University.

The overall study consisted of two phases: Phase I (the formulation of a research design, including the construction of a questionnaire and a pre-test for a nationwide survey), and Phase II (a nation-wide survey to assess the self-perceived needs of the above-mentioned population). This report pertains to Phase II of the study. Work on Phase II started in April 1979, and was completed in March 1980.

The principal investigator was Motoko Y. Lee, Assistant Professor of Sociology at Iowa State University. She was assisted by Mokhtar Abd-Ella of the College of Agriculture, University of Tanta, Kafr-El-Sheikh, Egypt, and Linda A. Burks, Graduate Assistant in the Department of Sociology and Anthropology, Iowa State University.

The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the National Association for Foreign Student Affairs and the Agency for International Development.

ACKNOWLEDGEMENTS

We wish to extend our special gratitude to Stephen C. Dunnett of the State University of New York at Buffalo, who was the NAFSA Advisor for Phase II, for his valuable advice and constant encouragement. We appreciated his genuine interest in the research and the faith he maintained in us through all the stages of the study.

We are grateful to the following persons at Iowa State University who assisted us in Phase II: Dr. Gerald E. Klonglan, the chairman of the Department of Sociology and Anthropology, who assisted us as our sociological advisor; Dr. Richard D. Warren, our statistical advisor and the director of the Research Institute of Education; and Dr. C. P. Han and Dr. Wayne A. Fuller, both of the Department of Statistics. We are indebted to Dr. Fuller for his assistance with data analyses, using Super Carp, a program developed by Dr. Fuller and his associates in the Department of Statistics. We would like to extend our sincere appreciation to Mr. Anil Londhe for computer programming of our data anlyses, and Mrs. Charlotte Latta and Mrs. Shu Huang of the Economics Computing Section for processing our data with great care. We wish to express our gratitude to Mrs. Barbara Munson and Mrs. Colleen Ryan for their assistance in every aspect of Phase II.

We received a great deal of encouragement and assistance from numerous foreign student advisors across the nation. We regret that we cannot acknowledge their contributions to this study by identifying them publicly. Our sincere appreciation is extended to the foreign students who spared their precious time for this study. Many of them sent us kind words of encouragement along with their responses.

Last but not least, we wish to express our sincere appreciation to the NAFSA personnel, in particular Miss. Ellen Wise, for assisting us during the study. We are grateful to both NAFSA and A.I.D. for giving us this opportunity to conduct a study which we hope will contribute, to some extent, to a better understanding of fellow human beings everywhere.

Motoko Y. Lee
Mokhtar Abd-Ella
Linda A. Burks

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INTRODUCTION

Background

Under United States government foreign assistance programs more than 180,000 students and scholars from developing countries have been trained in the areas of agriculture, health, nutrition, population, education, rural and urban development, science, technology, and engineering since 1941.[1]

Currently there are some 7,000 Agency for International Development (A.I.D.) sponsored participants receiving academic or technical training in the United States and overseas. Of this number, approximately 3,000 are new arrivals to the United States.

Many future leaders of government, industry, technology, education, and science will be drawn from the ranks of these A.I.D. participants. It is quite possible that their feelings, opinions, and educational formation may some day affect United States foreign relations.

When these participants come to the United States, they bring with them a desire for an education to provide them with the professional, social, and personal skills required for a meaningful role in their society.

While pursuing this goal, they must also become involved in the daily life of the United States, their host country. It is at this point that they are exposed to new and different societal values, roles, rights, and responsibilities. In short, they are suddenly in an alien culture which requires a significant adaptation.

The A.I.D. participant is required to compare these new and different cultural factors with those of his own culture and decide how best to cope with them. Depending upon the individual, the length of his sojourn, and the cultural differences and similarities, he will either adapt or not adapt to the new culture.

While there is not sufficient research on the adaptation of A.I.D. participants to make any generalizations, research on foreign students in the United States indicates that many students either do not adapt or return home without having attained their educational goals, or, if they are able to complete their academic programs, they still do not enter into any meaningful participation in American culture. Research on the problems of foreign students indicates that some nationalities experience greater and different adaptation difficulties than others.

Despite the large numbers of foreign students in general, and A.I.D. participants in particular, entering U.S. institutions of higher education each year, very little is done by our universities and colleagues to orient these newcomers to life and study here. The majority of students from the developing world arrive in the United States with very little idea of the organization of American institutions of higher education, let alone with an understanding of the cultural adjustment problems they will face.

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[1] *A.I.D. Participant Training: Report from the Agency for International Development*, Elizabeth J. McLaughlin, NAFSA: Washington, D.C., Summer 1978.

Not only have U.S. institutions of higher education been indifferent to the adjustment problems of foreign students, they have also given little attention to such problems as the relevancy of American educational programs for the developing world. Today, many developing countries are themselves questioning the suitability of western technology, education, and culture for their countries.

At a time when nationalism and demands for new relationships between the developed and developing nations is occurring, our institutions of higher education continue to neglect the area of international education. U.S. universities and colleges have failed to educate American students to live in an increasingly interdependent world. Many professionals working in the field of international education and associations of professionals, such as the National Association for Foreign Student Affairs (NAFSA), have long been concerned with these problems.

For the past decade, NAFSA has worked closely with A.I.D. in its attempts to conduct an important and complex international educational exchange program. In the early years of the NAFSA-A.I.D. relationship, the A.I.D.-NAFSA Liaison Committee served as a vehicle for soliciting the cooperation of these resources in identifying problems of A.I.D. sponsored students, as well as for the planning, organization, and support of projects and studies designed to improve foreign student programs.

In March 1978, the Office of International Training (OIT) of A.I.D. granted a three-year contract to NAFSA to continue activities which will maximize the total training experience for academically enrolled participants. The objectives of this contract are: (1) to improve the relevancy of academic programs for A.I.D. participants and other foreign students from developing countries studying in the U.S.; and (2) to provide increased access for these students to extracurricular professional and community involvement programs which will more effectively prepare participants for their roles in their countries' development.

Within the framework of the new three-year contract, NAFSA and A.I.D. identified several specific programs and projects to be conducted from 1978 to 1981. This led to the development of NAFSA's first major national research project in May of 1978.

The objective of the research project, carried out under a subcontract with Iowa State University, is to determine the met and unmet needs of foreign students from developing countries in the U.S. and to assess whether the self-perceived needs of A.I.D. sponsored students are different from or similar to those of other foreign students, both sponsored and non-sponsored.

The principal investigator for the research project, Dr. Motoko Lee of the Department of Sociology and Anthropology of Iowa State University, conducted the research in three phases. Phase I was the formulation of the research design, including the construction of a questionnaire, which was pretested on the campus of Iowa State University.[2] Phase II was a nation-

[2]For a report of Phase I, see Lee et al., 1979.

wide survey to assess the self-perceived needs of A.I.D. sponsored students and other sponsored and non-sponsored students.

Phase III, to be conducted in the 1980-81 contract year, will include supplementary and on-going analyses of data in response to the specific interests of NAFSA's various constituencies and other interested groups in international education. Phase III also includes the publication and distribution of a final report, as well as the distribution of the research findings throughout the NAFSA regions by NAFSA-A.I.D. Special Projects Coordinators.

Phases I and II of the research project were supervised by a research advisory committee. The committee for Phase I was composed of:

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Dr. Forrest Moore, Director
International Student Advisor's Office
University of Minnesota at Twin Cities
Minneapolis, Minnesota 55455

The Phase II advisory committee, chaired by Stephen C. Dunnett of the State University of New York at Buffalo, was composed of:

Dr. Audrey Gray, Director
Educational Programs
Sister Cities International

Dr. Forrest Moore, Director
International Student Advisor's Office
University of Minnesota at Twin Cities

NAFSA is greatly indebted to the members of both advisory committees for their interest in the research project and their competent supervision of all aspects of the research.

The Findings

In Phase II, the national survey of students from developing countries was conducted in Fall 1979. A multi-stage cluster sample with probability proportionate to size was used to select schools and students in the nation, based on the sampling procedure determined in Phase I. Copies of the questionnaire developed in Phase I were mailed to students chosen in 30 universities. Nearly 1900 students responded to the questionnaire. The sample represents a population of approximately 134,000 foreign students at U.S. universities and colleges whose foreign student enrollment was 300 or more. The survey population was composed of students from 102 nations, excluding North America, Europe (except Turkey and Portugal), and Japan. Of the 30 universities selected, the following have given NAFSA permission to acknowledge their participation:

Cornell University
Georgia State University
Kansas State University
Michigan State University
New Mexico State University
Oklahoma State University
Rutgers-The State University
Southern Illinois University
Stanford University
State University of New York at Buffalo
Syracuse University
The University of Texas at Arlington
University of Arizona
University of Colorado
University of Florida
University of Georgia
University of Illinois
University of Iowa
University of Minnesota
University of Oregon
University of Pittsburgh
Washington State University

In every category of needs, needs were not satisfied to the level of students' expectations, even though most of the needs were satisfied to a certain degree, rather than unsatisfied. Needs for practical experience (work experience and opportunities to apply knowledge), and anticipated post-return needs both for material rewards and for professional opportunities and facilities were among the least met. They were considered to be the most problematic ones for educational institutions to accommodate.

Financial needs and pre-return information needs were also among the least met, but were considered to be less problematic since they can more easily be solved. Among all the twenty-four categories of needs, information needs were best met. Students were also quite satisfied with the likelihood of achieving their primary educational goals, which they regarded with the highest importance.

Importance and satisfaction of the needs were analyzed in terms of a number of selected personal characteristics of the students. In particular, importance the students placed on various needs varied by:

— regions of the world from which they came;
— major field categories;
— sponsorship categories;
— undergraduate vs. graduate status distinction; and
— whether or not they had jobs waiting in their countries.

The degree of satisfaction felt by the students depended greatly on:

— regions of the world from which they came;
— self-evaluation of command of English;
— whether or not they had jobs waiting in their countries.

Several other characteristics were also analyzed in relation to need composites:

— school size;
— prestige accorded to one's country;
— age;
— marital status;
— length of stay;
— orientation; and
— previous international experience.

Professor Lee and her colleagues found that most needs were satisfied to at least some extent; however, the levels of satisfaction did not measure up to levels of importance.

The results of this study indicate the following profile of a student who is likely to be most satisfied:

— a student who is from Latin America (or Europe);
— a student who has a job waiting for him or her at home;
— a student who is residing with a U.S. student;
— a student who is on an assistantship;
— a graduate student rather than an undergraduate; and
— a student who perceives himself or herself as having a good command of English skills.

Among the least met needs, the needs for practical experience and anticipated post-return needs (material rewards such as jobs, adequate salaries, and professional opportunities) are the most difficult for U.S. institutions of high education to accommodate. Professor Lee recommends programs to incorporate practical experience or internships. For many

sponsored students the constraints of their scholarships and contracts would not permit this to occur. Furthermore, there is a need to define standards under which desired work experience could be incorporated into a sponsored student program. Faculty of U.S. institutions of higher education which are experienced in developing vocational education experiential learning standards should work with A.I.D. program officers and experienced foreign student advisors to develop such standards.

In view of the anticipated post-return needs, Professor Lee urges sponsoring agencies and U.S. educational institutions to regard education as a continuous process. Further she would like sponsors and institutions of higher education to maintain professional links with their students after they have returned home. This would require the strengthening of traditional U.S. alumni programs, many of which do not concern themselves with their foreign graduates.

Some of the anxiety about re-adapting to their home cultures expressed by students in this survey might also be alleviated by foreign student advisors and sponsoring agencies coming together to provide re-entry/transition workshops during the last year of study.

Another important finding is that self-perceived English proficiency is a strong predictor of satisfaction in progress toward achieving both primary and secondary goals as well as in facilitating course work. It is important for foreign students to be confident about their language skills in order to interact with native speakers and compete in an academic program. It is essential then for sponsoring agencies to provide opportunities for their students to participate in intensive English language and pre-academic orientation programs prior to commencing their academic training programs.

Conclusions

In this first national survey of students from developing countries, Professor Lee has broken new ground and identified a number of important issues for professionals in international education to consider. Her findings and recommendations should be carefully studied by sponsors, academic advisors, foreign student advisors, English as a second language teachers and others working with students from developing countries. I strongly recommend that NAFSA and A.I.D. consider sponsoring a national seminar of educators to study Professor Lee's findings and to develop policies and guidelines for both the sponsors of students from developing countries and the U.S. institutions of higher education which receive them.

On behalf of the National Association for Foreign Student Affairs, I wish to congratulate Professor Motoko Lee and her colleagues for producing this excellent study. For the past two and a half years, I have had the great pleasure and privilege of working closely with Motoko Lee. I have come to admire and respect her greatly for her skills as a researcher, her sincere interest in foreign students and her tremendous commitment to this project. I

thank her and her research team on behalf of my colleagues in international education and the foreign students we serve.

I also wish to thank a number of individuals whose faith in this project and support contributed greatly to its successful completion: Donald Azar, Marvin Baron, Zelda Faigen and James Worley, all members of the NAFSA-A.I.D. Steering Committee, and Archer Brown and Ellen Wise of the NAFSA Central Office.

I join with my colleagues in NAFSA and A.I.D. in expressing our hope that this research will contribute to the improvement of the academic careers and lives of future generations of students from developing countries.

Stephen C. Dunnett
Buffalo, New York

January 1981

I. OBJECTIVES OF PHASE II

The major objectives of Phase II were the following:

1. To assess the needs of foreign students from developing nations at U.S. universities and colleges as perceived by the students themselves.
2. To evaluate to what extent the students perceived identified needs were being met.
3. To identify the personal characteristics of individuals related to different needs as well as the degree to which the needs were being met. The personal characteristics will include sponsorships (A.I.D., home country governments, and others), graduate and undergraduate classifications, sex, regions of the world, etc.
4. To test selected hypotheses, which were formulated on the basis of the literature reviews and the pretest in Phase I.
5. To make appropriate recommendations to the educational institutions, the Agency for International Development, and the National Association for Foreign Student Affairs in order for them to consider means of accommodating some of the unmet needs identified in Phase II.
6. To identify future directions for research on foreign students and their educational institutions based on Phase II findings.
7. To disseminate information obtained in the national survey among relevant agencies, institutions of higher education, and individual professionals in international education by publishing the findings of Phase II, writing technical papers and/or making presentations at training seminars and other professional meetings.[1]

[1] These objectives were proposed, assuming that Phase II would commence in March and therefore data collection could begin in May, 1979. Due to the fact that Phase II began in April and consequently data collection was delayed until fall of 1979, we had to postpone our seventh objective with a hope that Phase III would be granted to achieve that objective.

II. REVIEW OF LITERATURE

This review of literature is the updated version of what was originally presented in the final report on Phase I of this project. Over 20 sources of literature were added to the previous review. In Phase I, a search of literature on foreign students was conducted with a review of reports, journal articles, books, dissertations, and other publications. Computer-based literature searches using the Iowa State University Library computer facility and a search conducted by the Smithsonian Science Information Exchange were also employed to identify recent publications through May, 1978, and research activities through July, 1979. The extensive review conducted by Spaulding and Flack (1976) was most helpful. The result of tne literature review and search for information on current research activities shows insufficient assessment of foreign student needs conducted on a national scale.

The following review is organized into three sections:

A. Overview of literature on foreign students.
B. Description of problems and needs of foreign students in the literature.
C. Literature which suggests important independent variables in relation to needs of foreign students.

Overview

A review of related research on foreign students reveals that previous studies vary in terms of the populations studied and in the subject matter. In this section, only a summary of the literature review to support the relevance of a study to assess needs of foreign students on a nation-wide scale is presented. We are unable to cite here all the publications we reviewed; therefore, the review should be read as that of representative literature.

Most studies have been concerned with such limited populations that they cannot be generalized. Studies that cover the population of the total foreign students in the U.S. have been very scarce. Many studies concentrated only on one campus (e.g. Zain, 1966; Rising and Copp, 1968; Johnson, 1971; Win, 1971; Moghrabi, 1972; Gabriel, 1973; Han, 1975; Niekerk, 1975; Culha, 1974; Clarke and Ozawa, 1970; Collins, 1976; and Stafford, 1977). For example, Clarke and Ozawa (1970) studied major adjustment problems of foreign students at the University of Wisconsin. Niekerk (1975) studied the perceptions of faculty, foreign students, and foreign alumni about foreign student needs and services available at Andrews University. Opportunities for involvement for their spouses, English language instruction, equal treatment in financial matters, practical application and experience, more friendly faculty-student relationships, and more flexibility in visa and employment regulations were found to be the most important needs as expressed by foreign students. The study by Hull (1978) is an exception; he explored the adjustment of foreign students

on three U.S. campuses. However, the campuses were purposively selected and small in number; thus the generalizability of his findings is limited.

Several studies dealt with foreign students in one state (e.g. Peterson and Neumeyer, 1948; Nenyod, 1975; and Sharma, 1971). For example, Sharma (1971) investigated academic and personal problems of foreign students in the state of North Carolina.

Some studies were concerned with one nationality group (e.g. Basu, 1966; Cortes, 1970; Vorapipalana, 1967; Hj:zainuddin, 1974; Davis, 1973; Moftakhar, 1976; and Gama and Pederson, 1976). For example, Cortes (1970) examined factors related to the migration among Philippine students who studied in the U.S. from 1960-1965. Hj:zainuddin (1974) studied factors related to academic performance of Malaysian students at Louisiana State University.

Other studies focused on students from one region in the world (e.g. Win, 1971; Hagey and Hagey, 1974; Eberhard, 1970; Gezi, 1961; and Pruitt, 1977). For example, Eberhard (1970) revealed the need for continuity of contacts between foreign alumni and the U.S. academic community in his study of returning Asian students. Pruitt (1977) studied a representative sample of foreign students from Sub-Saharan Africa in the U.S. She identified the major characteristics of African students in their adjustment to American culture and their assimilation into American society.

Some studies concentrated on participants of specific programs (e.g. Bower et al., 1971; Vorapipalana, 1967; and Kimmel et al., 1969-1972). Kimmel et al. (1969-1972), for example, assessed satisfaction of participants with A.I.D. training programs. Studies of a general foreign student population have been very few (e.g. Morris, 1960; and Selltiz et al., 1963), and it has been a long time since such a study was done.

There are also some studies concerned only with particular professional groups or specific majors (e.g. Mackson, 1975; Findley, 1975; and Dhillon, 1976). For example, Mackson (1975) studied the relevance of agriculture engineering programs and the needs of agricultural engineering alumni. He found that most alumni felt their programs prepared them to work at home. Alumni expressed the need for professional materials and continued contact with the U.S. through exchange visits, joint research projects, and the like. Dhillon (1976) outlined some common problems faced by foreign nurses in the U.S. These problems concern English language and communication, American food, family structure, and taking exams.

The subject matters of previous studies were mostly centered around academic performance (e.g. Hountras, 1956; El-Lakeny, 1970; Hj:zainuddin, 1974; and Chongolnee 1978). For example, Hountras (1956) examined factors associated with academic success for foreign graduate students at the University of Michigan. Chongolnee (1978) studied factors related to academic achievement of foreign graduate students at Iowa State University.

The second major area of previous studies was adjustment to the U.S.

environment and problems thereof (e.g. Selltiz et al., 1963; Dunnett, 1977; Bouenazos and Leamy, 1974; and Hull, 1978). For example, Selltiz et al. (1963) investigated a sample of foreign students in the U.S. in terms of factors related to social and academic adjustment and attitude toward the U.S. Dunnett (1977) placed a major focus on the effect of an English language program on foreign student adaptation.

A third major area of concern has been non-return to the home country (e.g. Ritterband, 1968; Das, 1969; Myers, 1972; and Glazer, 1974). For example, Das (1969) examined the effects of length of stay, age, marital status, the degree pursued, etc. on non-return. Myers (1972) explored the characteristics of non-returnees as well as identified the factors related to non-return.

Although there appears to be a growing concern about the needs of foreign students, research on their needs has been limited. There have been studies on needs for special counseling for foreign students (Altscher, 1976; and Walter, 1978), more relevant education (Coombs, 1961; Moore, 1970; and Sanders and Ward, 1970), more extracurricular activities (Canter, 1967) and a continued relationship with the U.S. academic community after returning home (Eberhard, 1970 and Mackson, 1975). But how foreign students themselves feel about such needs remains largely uninvestigated. Nor has there been comprehensive research conducted to indicate how such needs are satisfied under the current practices. A study by Culha (1974) on foreign student needs and satisfactions is probably one of the very few studies that has focused on foreign student needs per se. Culha compared the needs and satisfactions of foreign students at the University of Minnesota to those of a group of American students. He found that all needs considered important by foreign students were also considered important by Americans. The only difference between the two groups was in the emotional security scale. This study, as many others, so far has limited generalizability, since the study was conducted on one campus.

In a more recent study, Lather (1978) studied foreign student perception of four educational components at Western Michigan University. He found significant differences between the perceived level of importance and the derived level of satisfaction on each of the four components. The importance level was higher than the satisfaction level in every case. The discrepancy between foreign students' views of problems and those of foreign student advisors' was recognized by Von Dorpowski (1978) in terms of intensity, not in terms of the ranking order of the problems. In other words, foreign student advisors tend to view the problems as more serious than foreign students themselves.

Description of Problems and Needs in the Literature

A number of authors have devoted their efforts to the study of foreign student adjustment and problems thereof. Several have identified the problems foreign students have in the United States.

What Do Foreign Students Seek in the U.S.?

Han (1975) found that the goals of foreign students from the Far East did not differ by nationality, marital status, or academic level. He asserted that the principal goals students wanted to achieve in the U.S. were educational. Singh (1976) also found that the main goals of foreign students were educational in nature. Likewise, Hull (1978) found that academic goals were the most important to foreign students. Spaulding and Flack (1976), after reviewing an extensive amount of literature, concluded that the major reasons foreign students came to the United States were the following: to get an advanced education or training not available at home, to acquire prestige through a degree from a U.S. institution, to take advantage of available scholarship funds, to escape unsettled political or economic conditions, and to learn more about the United States.

A unique study was conducted by Knudsen (1977) to determine the critical factors that would negatively influence the goal attainment of foreign students in the international education program for the California State University and College System. The study was not focused on identification of goals from the students' points of view as such, but on identification of critical factors for failure with use of the fault tree analysis based on the perceptions of international education administrators.

What foreign students seek in their study in the U.S. appears to be educational goals, and less importantly, acquisition of prestige, experience and knowledge of the U.S., and an escape from the political problems in home countries. However, it has been observed that the goals of foreign students, their home governments, their employers, the U.S. government, and U.S. universities are not always the same and in many cases are in conflict (Holland, 1956 and Putman, 1965). Spaulding and Flack (1976) state that a gap seemed to exist in communication between sponsors, programming agencies, institutional administrators and counselors, and teaching faculties. The problem of conflicting goals has to be solved through effective communication among all parties concerned (Holland, 1956 and Putman, 1965). Heft (1963) also suggested that the training of foreign students could be made more effective through better cooperation between American and foreign institutions. A colloquium on foreign graduate students in the U.S. recommended that better links should be established with foreign governments, universities, and organizations as a basis for planning (Spaulding and Flack, 1976).

What are the Problems and Needs of Foreign Students?

Over the decades, there have been many studies to identify problems and needs of foreign students on different campuses. Kincaid (1951) studied a sample of foreign students from developing nations on seven California campuses and reported that there were no serious problems in English language, finance, housing, course of study or grades, but he found a strong need for expansion of extracurricular activities. Of primary im-

portance was a need for opportunities to visit American families and travel. However, Cannon (1959) asserted that three major problems of foreign students were with regard to communication, finances, and scholastic requirements.

More recently, Moore (1965) suggested that dissatisfaction of foreign students with their American experience was with the specifics and not the general. He delineated the following foreign student problems: 1) problems related to proficiency in English; 2) problems caused by differences in the educational systems; 3) problems of adjustment to the American culture; 4) problems related to the complexity of the situation in terms of the number of adjustments required and the time allowed for making them; 5) problems of legal impediments to study abroad; 6) problems of academic performance; 7) problems of inadequate resources; and 8) problems of social adjustment.

A number of studies supported Moore's view. The study conducted by Rising and Copp (1968) uncovered lack of proficiency in English as the major problem. They also pointed out foreign students' difficulties with accommodations, transportation, privacy, American food, etiquette, shopping, and use of facilities. Securing good academic advice, financial difficulty, insufficient orientation, and lack of social and personal guidance were found to be the major problems by Ursua (1969). Shepard's (1970) study emphasized inadequacies of predeparture information and on-campus orientation.

Johnson (1971), in a study of foreign students at the University of Tennessee, also claimed that English language proficiency was the most frequent problem of foreign students. Financial problems, separation from family, and homesickness came next. Lack of contact with home country and discrimination were less frequently mentioned problems. Johnson suggested, by comparing responses of foreign students and those of American students, that the problems of both foreign students and American students were basically the same except for the language problem. Likewise, Breuder (1972) found that foreign students in Florida colleges cited problems with financial aid, English language, placement, and admission.

Win's (1971) study on Indian and Japanese students at the University of Southern California revealed that academic problems were most frequently followed by financial, housing, religious, personal and interpersonal problems in that order.

Moghrabi (1972) studied the problems of foreign students at the University of Nebraska and found that English language problems were the most prominent. He also found that emotional anxiety was commonly due to lack of social life and linguistic problems. However, financial problems were not found to be of concern to the majority of students in his study. Gabriel's (1973) study at Purdue University again revealed that most foreign students experience language difficulties in understanding lectures, writing term papers, and expressing ideas, even though these problems became less important after the first year. Han's (1975) findings

at the University of Southern California also identified finance, English language, and making American friends to be the most serious problems. Nenyod (1975) also revealed that the major problems of foreign students in Texas were communication, academics, finances, housing and food, religion, social and personal well-being in descending order.

Collins (1976) studied the problems of foreign students at Harvard University. He found that the major problems, in the order of their importance, were social and recreational activities, finances, living conditions, employment, home and family, personal psychological relations and courtship, sex and marriage. Stafford (1977) found that the major problems of foreign students at North Carolina University were problems of adjustment, homesickness, housing, social relations with the opposite sex, English language, and finance. Von Dorpowski (1977) found that the most critical problems for Oriental, Latin American, and Arabian students in the U.S. were financial aid, English language, and placement. A symposium on educating foreign chemists (Wotiz, 1977) specifies poor educational background and lack of English as the most serious problems of foreign chemistry students. The problem with English language was noted by Perkins, et al. (1977), as being particularly acute among Chinese students, more so than among other students.

Basu (1966) added another problem to the above with his study on Indian students, that being the need for additional experience in the U.S. before returning home. He also reported that homesickness and concern with currency exchange prior to departure were important difficulties. Some authors emphasize the need to provide prospective foreign students with information about the U.S. educational system (Edgerton, 1975; and Jenkins, 1977). In a study of Iranian students at Oklahoma State University, Moftakhar (1976) found that most students had little accurate information about U.S. colleges and universities prior to arrival.

Problems and needs of foreign students seem to change over time. Klien et al. (1971) reported that early problems were those associated with loneliness, followed by academic problems, and later by emotional and interpersonal problems. They also found that self-confidence was a major factor in meeting social needs of foreign students. They suggested a shift be made from concern with the foreign aspect of foreign students to the human aspect.

The loneliness problem is coupled with a relative lack of interaction between foreign students and U.S. students.

Penn (1977) investigated the barriers of interaction between foreign and American students. Foreign students considered difficulty in understanding the language and their unfamiliarity with American customs to be the major barriers to interaction with Americans. American students stated the following barriers in the order of seriousness: 1) unfamiliarity with foreign customs; 2) misinterpretation of actions; 3) dislike of particular national groups; 4) dislike of personal characteristics such as aggressive behavior and attitude toward members of the opposite sex; and 5) language problems.

Foreign student problems and needs do not end by their returning home; yet, they do change in nature. Basu (1966) found that Indian graduate students expected difficulties in personal and professional life upon return. Orr (1971) indicated that many foreign graduates experience readjustment problems upon returning home. Gama and Pederson (1976) found that Brazilian returnees had more problems readjusting to their professional life at home than they had with adjusting to their families. In terms of professional life, returnees experienced some difficulty with: 1) adjusting to the system as a whole; 2) their role as college professors; 3) lack of intellectual stimulation; 4) lack of facilities and materials; 5) excessive red tape; and 6) lack of opportunity and time to do research. In terms of family life, most returnees had little difficulty except that they experienced some value conflict and lack of privacy. Preston (1966) revealed that less than half of the Indian participants made considerable use of their U.S. training. Reasons for not using their training were lack of material resources, negative attitudes of colleagues and superiors about introduction of new ideas, and slow rates of progress and organization. Spaulding and Flack (1976) asserted that foreign alumni wished to maintain contact with their U.S. universities but that the universities lacked programs and the resources to do so. Mackson (1975) states that Agricultural Engineering alumni expressed the following needs, in order of importance: 1) continuous information in their field; 2) return to the U.S. at intervals to keep up with recent developments; 3) textbooks donated to their libraries and their departments; 4) having visiting scholars; 5) doing thesis research at home; 6) joint research projects; and 7) continued relations between graduates and advisors. These needs may not be particular to agricultural engineers and may be true for other alumni as well.

Problems and needs widely identified in the literature included those in language and communications, financial resources, academic programs and performance, social life and adjustment coupled with loneliness, housing, daily living (food, etiquette, etc.), orientation in conjunction with the adjustment problems, and extracurricular experiences. Upon returning home, they face different problems which are nevertheless related to some of the problems they face in the U.S.

There have been a number of publications which are geared to either problem solving or critical evaluations of the programs the U.S. educational institutions offer. Edgerton (1975) states that planning programs for foreign students requires sensitivity and skill. He stressed that foreign students must be given an early and accurate idea about their options. Altscher (1976) argued that American colleges and universities should provide specific counseling for foreign students to solve their unique problems. Walter (1978) states that the use of counseling services by foreign students has been minimal, because American counselors have not been trained to provide effective support for them. Understanding the cultural differences between the counselor and the student is a prerequisite for effective counseling; therefore, counselors should be trained to identify these differences (Walter, 1978 and Helms, 1978). Bohn (1957) found that one-

third of the foreign students in his study thought that their study programs in the United States did not meet their academic needs. He attributed this problem mainly to communication problems. Deutsch (1965, 1970) reported that many foreign students felt much of the theoretical knowledge they learned was not applicable to their home countries' problems. Kelly (1966) warned that foreign students were not prepared for positions they were going to hold at home since they were taught with equipment they would never use again and that they were getting second-class degrees. Vorapipalana (1967) also reported that A.I.D. participants from Thailand criticized their programs for not providing enough practical experience and for being too short. On the other hand, Ogunbi (1978) found that foreign students in the College of Agriculture and Natural Resources had a more optimistic view regarding the relevancy of their programs to the home country's developmental needs than others.

Sanders and Ward (1970) pointed out a number of issues worthy of serious consideration. First, the training of foreign students is based mainly on U.S. experience within a U.S. setting. Second, American professors have little or no international experience and are unfamiliar with human and economic issues that concern foreign students. Finally, degree requirements are narrowly prescribed, and foreign students have little opportunity to mold their programs to fit their needs.

Making U.S. education more relevant for foreign students has been investigated. Suggestions center around taking the students' needs into consideration. Coombs (1961) argued for adjusting the programs to the needs of foreign students. Stone (1969) recommended that the training of foreign students from developing nations include identification of research problems, maintenance skills, and administrative techniques. Kaplan (1970) argued that NAFSA must encourage educational institutions and the government to adjust to the presence of foreign students by making every effort to insure relevance of a U.S. education to global problems. There is, however, indication that none of the above suggestions have been pursued to any considerable degree. NAFSA (1972) reported that academic departments tended not to accommodate foreign students' special needs and problems and did not offer courses to help foreign students understand how training could be transferred to their home countries. Chiang and Klinzing (1975) suggest that foreign student programs should avoid more breadth, concentrate on practice and field work, and emphasize the benefits and pitfalls of technological transfer. Findley (1975) stresses the need to consider the status of the chemical industry in the student's country in planning programs for foreign chemical engineering students.

Canter (1967) emphasized the need to use foreign students as resources in classroom situations, including developing countries' experiences in the scientific curricula, and developing seminars of foreign specialists from certain geographic regions.

Moore (1970) proposed: 1) flexible work regulation for foreign students; 2) study programs which would integrate and apply class learning to situations in foreign students' home countries; 3) courses relevant

to development and barriers to change; and 4) internships that would approximate human and environmental conditions in foreign students' home countries.

In summary, the literature suggests diversified needs of varying importance existing among foreign students. They may be broadly categorized as: 1) academic needs; 2) linguistic needs; 3) other cultural-related needs; 4) interpersonal needs; 5) financial needs; 6) daily-living materialistic needs; and 7) post-return needs.

Independent Variables Suggested in the Literature

In this section, we will review those publications in which certain independent variables were identified as being significantly related to problems and needs of foreign students. The independent variables we will identify are recurrent ones throughout the literature.

Age

Age as an independent variable has been investigated in relation to academic performance (e.g. Hountras, 1956; Pavri, 1963; Selltiz et al., 1963; El-Lakany, 1970; Elting, 1970; Hj:zainuddin, 1974; Chongolnee, 1978; and Siriboonma, 1978), adjustment problems (e.g. DuBois, 1956; Gaither and Griffin, 1971; Sharma, 1971; and Han, 1975), perception of educational experiences (Lather, 1978), and probability of returning home after graduation (e.g. Chu, 1968; Ritterband, 1968; Das, 1969; Cortes, 1970; Myers, 1972; and Shin, 1972).

As for the relationship between age and academic performance the evidence seems to be inconclusive. While El-Lakany (1970), Pavri (1963), Siriboonma (1978), and Elting (1970) reported that older students had higher academic performance, Hj:zainuddin (1974) found that younger students performed better academically. On the other hand, age was found not to be related to academic performance by Hountras (1956) and Selltiz et al. (1963).

The relationship between age and adjustment problems is more consistent in the literature. Gaither and Griffin (1971) stated that adjustment problems for younger foreign students were minimal compared to those of older students. A similar conclusion was reached by Han (1975). Han reported that foreign students who were more than 30 years old encountered more major academic problems than students less than 30 years old. This may be due to differential emphasis on academic work by different age groups as suggested by Hull (1978). He found that older students were more involved with academic concerns. Younger foreign students were also found to have higher food adaptation scores (Ho, 1965). However, Clark (1963) found that older students were more satisfied with their overall experience in the U.S. On the other hand, Sharma (1971) found that age upon arrival in the U.S. had little effect on foreign student problems.

Lather (1978) in the study of foreign student perception of educational

experiences, found that neither importance nor satisfaction were related to age. He observed no difference between age groups on any of the four measures he used, i.e. the quality, adaptability, and utility of: 1) faculty advisor's activities, 2) course work, 3) university activities and services, and 4) cross-cultural communications.

The relationship between age and the probability of remaining permanently in the U.S. is again inconclusive. Das (1969) concluded that younger foreign students were less likely to remain in the U.S. after completing the degree than older students. Cortes (1970) found that older Philippine students were less likely to stay permanently in the U.S. than younger ones. The studies by Myers (1972) and Shin (1972) also indicated that older students were more likely to return home than younger ones. Spaulding and Flack (1976) arrived at the same conclusion based on their review of literature. Meanwhile, Chu (1968) reported that there was no significant relationship between age upon arrival in the U.S. and non-return in his study.

Sex

Sex difference has been investigated in relation to, for example, academic performance (e.g. Hountras, 1956; El-Lakany, 1970; Melendez-Craig, 1970; Hj:zainuddin, 1974; and Chongolnee, 1978), problems encountered in the U.S. (e.g. Porter, 1962; Bouenazos and Leamy, 1974; and Collins 1976), adaptation and adjustment (e.g. Clubine, 1966; Dunnett, 1977; and Pruitt, 1977), and perception of educational experiences (Lather, 1978).

El-Lakany (1970) found that females had better academic performance in terms of GPA than males. Hj:zainuddin (1974) found that females performed better academically in the first year only. On the other hand, Hountras (1956), Melendez-Craig (1970), and Chongolnee (1978) concluded that sex was not related to academic performance. It is worth noting that none of these studies reported that male students had better academic performance than female students.

The results of studies concerning the relationship between sex and problems encountered in the U.S. concur that females encounter more problems than males. Porter (1962) reported that females checked more problems than males in the Michigan Foreign Student Problem Inventory. Females were also found to experience more discrimination and transportation problems (Bouenazos and Leamy, 1974). However, Collins (1976) found that male foreign students experienced significantly more problems than females. Dunnett (1977) stated that the sex difference of foreign students was an important factor in adaptation in the U.S. Female foreign students were found to be more familiar with resource persons on campus than males (Clubine, 1966). However, Pruitt (1977) reported that male African students were better adjusted to the U.S. environment than female counterparts. Lather (1978), in the study of foreign student perception mentioned earlier, found no difference between males and females.

All in all, sex difference appears to be an important factor to be considered.

In a recent study of foreign alumni from developing countries, Myer (1979) found male foreign alumni get involved in their countries' development more than females.

Marital Status

Marital status is an important variable in foreign student studies. According to the literature, it appears that married and unmarried foreign students on U.S. campuses will have different lifestyles, needs, and problems. Marital status was found to be related to academic performance (e.g. Hountras, 1956; Pavri, 1963; and El-Lakany, 1970), problems experienced (e.g. Pavri, 1963; Han, 1975; and Collins, 1976), satisfaction with U.S. experience (e.g. Clark, 1963 and Siriboonma, 1978), and probability of staying permanently in the U.S. (e.g. Das, 1969).

Married students were found to have higher academic achievement than singles in the studies by Hountras (1956), Pavri (1963), and El-Lakany (1970), while Melendez-Craig (1970) and Chongolnee (1978) reported that marital status was not related to academic performance of foreign students.

Dunnett (1977) found that marital status was an important factor in the adaptation of foreign students. More married students than single students were found to be satisfied with their U.S. experience (Clark, 1963, and Siriboonma, 1978). In a study by Han (1975), it was concluded that unmarried foreign students encountered more major problems than married students. Similar results were reported by Collins (1976), while Pavri (1963) found the opposite to be true.

Regarding "brain drain," married students whose families remained at home were less likely to stay in the U.S. (Palmer, 1968, and Das, 1969). Spaulding and Flack (1976) reviewed the literature and concluded that married students were more likely to return home than single students.

English Language Proficiency

For foreign students in the U.S., English language proficiency is likely to be of central importance. Most of what they do in terms of academic work and social conduct depends on their English proficiency. The majority of the research findings agreed that proficiency in English was positively related to academic performance (e.g. Sugimoto, 1966; Ohuche, 1967; Halasz, 1969; Uehara, 1969; Elting, 1970; Melendez-Craig, 1970; and Ayers and Peters, 1977). On the other hand, Selltiz et al. (1963) found that facility with English was not related to academic performance.

Lack of proficiency with English is often though of as the source of foreign student social problems. Morris (1960) found that difficulty with English was negatively related to foreign students' satisfaction with their stay and contact with U.S. nationals. Nenyod (1975) concluded that some social, housing, and food problems were due to lack of proficiency in English.

English language proficiency was also found to be related to social and emotional adjustment (e.g. Selltiz et al., 1963; and Hull, 1978) and adaptation to American food (Ho, 1965). Spaulding and Flack (1976) concluded that students who had difficulties with oral or written English tended to have both academic and social adjustment problems.

Foreign alumni who had better command of English during their study in the U.S. get involved in their countries' development more than those who had some difficulty with English (Myer, 1979).

Academic Level

A number of studies investigated academic level in relationship to academic performance (e.g. Hountras, 1956), adjustment and problems thereof (e.g. Porter, 1962; Quinn, 1975; Collins, 1976; and Stafford, 1977), satisfaction with U.S. experience (e.g. Siriboonma, 1978) and non-return (e.g. Das, 1969). Hountras (1956) found that the degree held at admission was related to academic achievement.

Research on problems encountered by foreign students indicates an inverse relationship between academic level and the total number of problems.

Porter (1962) found that undergraduates checked more problems in the Michigan International Student Problem Inventory than graduates. Collins (1976) found that the kinds of problems encountered by foreign students vary by academic level. Stafford (1977) found that undergraduate foreign students reported greater difficulty in English language, academic course work, finances, food, unfriendliness of the community, and maintaining cultural customs than did graduates. Siriboonma (1978) reported that academic level was positively related to satisfaction with the U.S. experience. However, Quinn (1975) found that undergraduate foreign students had the most successful adjustments, while Ph.D. students had the least successful adjustment. Undergraduate students were also found by Selltiz et al. (1963) to establish more social relationships than graduate students.

There is agreement among research results that the higher the academic level of foreign students, the less likely they are to return home. Borhanmanesh (1965) found an inverse correlation between academic status and the likelihood of return. Similar findings were reported by Das (1969 and 1971). Comay (1969) found that graduate study was the single most important variable explaining migration. While the above studies implied a linear relationship between academic level and brain drain, Myers (1972) reports a curvilinear relationship. He found that both undergraduates and Ph.D. students were less likely to return home than master's degree students. However, Spaulding and Flack (1976), in their literature reviews, concluded that Ph.D. graduates were least likely to return home. On the other hand, in a study of foreign alumni from less developed countries, Myer (1979) found that those who received Ph.D. degrees are more satisfied with their U.S. education, use their education

more and transfer what they learn to their countries more than those who bachelor's or master's degrees.

Sponsorship

Sponsorship has been studied in relation to academic performance (e.g. Hountras, 1957; Clark, 1963; Pavri, 1963; Ohuche, 1967; El-Lakany, 1970; and Chongolnee, 1978), adjustment to U.S. environment (e.g. Pruitt, 1977), concern with relevancy of U.S. education, and non-return (e.g. Myers, 1972; Chu, 1968; Palmer, 1968; Das, 1971; and Glazer, 1974).

Hountras (1957) found that sponsored foreign students had better academic performance than self-supporting students. Clark (1963) found that foreign students who held government grants had higher performance than those who did not. Similar results were found by El-Lakany (1970). Other studies reported that students who had some kind of financial support performed better than those who did not (Pavri, 1963 and Chongolnee, 1978). On the other hand, Ohuche (1967) found no difference in academic performance between Nigerian undergraduates who had government scholarships and those who did not.

Pruitt (1977) found that sponsorship was related to social adjustment to the U.S. environment; government sponsored students had better adjustment. However, Hull (1978) found that foreign students without scholarships were more likely to interact with U.S. nationals.

Research findings agree that foreign students sponsored by their home governments are more likely to return home and more often intend to return than self-sponsored students or students sponsored by non-national sources (Myers, 1967, 1972; Chu, 1968; Palmer, 1968; Das, 1971; and Glazer, 1974).

Myer (1979) found that alumni who had some kind of sponsorship tend to make more use of their education in their own countries than those who were self-supporting.

Major fields

The field in which a foreign student majors may determine the probability of his success in academic performance and in the problems he faces. In addition, the relevance of U.S. education for the country of origin may differ by fields.

Chongolee (1978) found that the academic performance of foreign students differed by major field. The engineering majors had the highest performance, followed by physical science majors, then biological science majors. Social science majors had the lowest academic performance. Hountras (1956) found that a proportionately greater number of foreign students majoring in social and physical sciences incurred academic failure than those in other fields. By contrast, a proportionately smaller number of foreign students majoring in humanities experienced failure. In another study, Han (1975) found that foreign students majoring in engineering had more problems with English than students in other disciplines.

Quinn (1975) found that field of study was related to successful adjustment. The results show that students majoring in liberal arts adjusted more successfully than those in the scientific disciplines. Similar results were found by Hull (1978) who reported that foreign students majoring in art and humanities tended to interact with U.S. nationals more than those in other majors.

The probability of using skills and applying competencies gained in U.S. education also differed by discipline. Spaulding and Flack (1976) suggested that natural scientists and engineers tended to be more inclined to apply their new competencies than those in humanities and social sciences; and that the latter was more oriented toward social change. Myer (1979) found their use of U.S. education and their involvement in their countries' development also varied by major field among foreign alumni. Those who majored in agriculture and education had more use and greater involvement than others.

The likelihood that a foreign student might stay permanently in the U.S. was also found to vary in relation to the student's field of study. Spaulding and Flack (1976) pointed out that foreign students majoring in medicine, science, engineering, or the humanities were less likely to return home than others. This generalization was based on several studies (e.g. Henderson, 1964; Cortes, 1970; and Myers, 1972).

Length of stay

After reviewing the literature, Spaulding and Flack (1976) concluded that length of sojourn has remained a confirmed, significant variable related to adjustment problems, academic performance, decisions to stay abroad, satisfaction with training, and alienation and marginality.

Length of stay was found to be related to adjustment. Ho (1965) found that length of stay was related to food adaptation among students from Oriental countries. Quinn (1975) found that years at Stanford were positively related to successful adjustment. Hull (1978) found that length of stay in the U.S. was positively related to the degree of adjustment.

In a study of foreign students' knowledge of legal rights and civil regulations, Guglielmo (1967) found that length of stay was related to the students' knowledge of immigration, automobile operators' responsibilities, income tax and social security, housing, employment, purchasing and installment buying.

The relationship between length of stay and foreign student problems seems to be rather complex. Some foreign student problems were found to diminish by length of stay while others may have grown. With regard to problems with English, research findings show that foreign students experience English difficulties during the first year and that the difficulties decreased after one year (Lozada, 1970 and Gabriel, 1973). A similar trend was observed with regard to the relationship between length of stay and social problems. Tanenhaus and Roth (1962) found that students who had been at New York University for less than six months complained much more frequently about the lack of opportunity to meet other people than

those who had been there for six months or more. However, this trend is not common for all problems. Shattuck (1961) found that some foreign students who had been in the U.S. for one or more years often remained seriously maladapted and did poorly in academic work.

As for the relationship between length of stay and the total number of problems, there is disagreement among research findings. On one hand, Porter (1962) found that foreign students who had been at Michigan State University for 13 or more months checked more problems on the Michigan International Student Problem Inventory than did those who had been there for one year or less. On the other hand, Day (1968) reported that the number of problems foreign students experience did not increase by length of stay, but that the specific kinds of problems might change. Sharma (1971) found that length of stay had little effect on problems of foreign students.

The relationship between length of stay and the likelihood of returning home is more consistent. There is agreement that the likelihood of returning home declines as the length of stay extends. Das (1969) found that foreign students who studied in the U.S. for two or more years were less likely to return home than those who stayed here for one year. Similar results were found by Myers (1972), Shin (1972), and Thames (1971). Spaulding and Flack (1976) concluded that foreign students who lived abroad for an extended period of time were less likely to return home. However, Niland (1970) reported that this was true only for students from certain countries.

In Myer's (1979) study of foreign alumni from developing countries, length of stay in the U.S. was found to be positively related to foreign alumni's satisfaction with their U.S. education.

Region of the world and country of origin

Sharma (1971) found that students from South Asia had better academic adjustment than those from the Far East or Latin America. Chongolnee (1978) found that Asians had better performance than others. Spaulding and Flack (1976) concluded that the problems of foreign students tended to vary depending on the country or region of the world from which they came. Hull (1978) also found that goals, adjustment, and problems of foreign students varied by country of origin.

Most of the multi-national and multi-regional research on foreign students indicates that foreign students from different regions in the world differ in terms of their adjustment and the problems they encountered in the U.S. Hountras (1956) reported that African students had the fewest problems. He also found that students from the Near East, the Far East, and Latin American had more difficulties than those from other regions. Collins (1976) found that the number of problems faced by foreign students varied by region of origin. Asians had the greatest number of problems and Caribbeans had the fewest. Stafford (1977) found that Africans had the most difficulty in the U.S. and Latin Americans had the least. When difficulties were considered separately, he found that: a) in terms of English,

Orientals and Southeast Asians had the greatest difficulty, while those from India, Pakistan, and Africa had less; b) in terms of future vocational plans, students from the Orient, India, and Pakistan had the highest difficulty while those from Latin America and Southeast Asia had the lowest; c) Africans had the greatest difficulty with unfriendliness of the community; and d) Asians had the greatest difficulty with social relations, while Latin Americans had the least. Lather (1978) in the study of foreign student perceptions found no difference on the basis of region with regard to the importance and satisfaction of the aspects he investigated. Selltiz et al. (1963) found that national background was related to emotional adjustment. Quinn (1975) found successful adjustment depended upon the regions from which students came. He reported that European and Canadian students had the fewest problems followed by Middle Eastern students, then Latin American students. Hull (1978) found that Africans were most likely to face discrimination and Iranians were most likely to have academic problems.

Myer (1979) found that foreign alumni's use of their U.S. education and their involvement in development varied by their region in the world. Africans tend to use their education and get involved in development more than others.

Size of school

The problems foreign students may face appear to differ by size of school. Previous research indicates that the size of the university influences the problems and satisfactions of foreign students. Selltiz et al. (1963) found the size of the university to be negatively related to the likelihood for foreign students to form social relations with U.S. students, but positively related to emotional adjustment. They also found that size of university was not related to academic adjustment. Nenyod (1975) concluded that foreign students attending small institutions had a greater number of academic problems, a smaller number of housing and food problems, and a smaller number of social problems than those attending medium sized or large institutions. No difference was found regarding communication, financial, religious, and personal problems. It seems, accordingly, that foreign students at small schools face fewer problems in all areas except academic work.

Orientation

Orientation programs are often considered as tools to help foreign students meet their needs, overcome their problems, and facilitate their adjustment to American life. However, research findings are not conclusive about the effects of orientation.

Selltiz et al. (1963) found that attending orientation was likely to increase the extent of social relations formed with U.S. nationals by Asian students. But this was not the case for other foreign students. Comparable results were reported by Lozada (1970) who found that orientation programs encourage personal contacts and friendships. Longest (1969)

found that foreign students participating in orientation had lower transcultural anxiety scores.

Orientation programs were found to increase the knowledge of foreign students. Kimmel (1969) found that there was information gain as a result of a one week orientation. Longest (1969) reported that foreign students who attended an orientation program had significantly higher knowledge of the university's regulations than those who did not. Longest also found that foreign students who attended an orientation program had higher English language test scores and higher academic performance. Chongolnee (1978) found that orientation had an effect on academic performance, while Kimmel (1969) found that an orientation had little effect on attitude.

Myer (1979) found that foreign alumni who had more predeparture information, in terms of counseling on U.S. education, use their education more than others. Harfoush (1977) emphasized the importance of presojourn orientation based on his study.

Living arrangements

Selltiz et al. (1963) found that living arrangement were significantly related to the extent students formed social relationships. Foreign students who lived in dormitories established more social relationships than those who lived in apartments.

Siriboonma (1978) found that living arrangements were related to the degree of satisfaction of foreign students. Students living in the university married student housing were the most satisfied while those living in private housing were the least satisfied. Wilson (1975) found that living on campus and having an American roommate are related to high social activities and involvement with Americans.

Employment at home

Employment status and/or opportunities at home were studied in relation to perceived relevance of education and migration.

Ford (1969) found that foreign students who did not have a job waiting at home were more apt to consider their educational programs as moderately or highly relevant than those who did, while those who had a job waiting tended to have some strong reservations about the relevance of their educational experience. Spaulding and Flack (1976) suggested that students with vague career expectations tended to be more satisfied with their U.S. education than those whose objectives were more clearly defined.

Das (1969) found that foreign students whose countries provide greater employment opportunities were more likely to return home after graduation. Borhanmanesh (1965) found that Iranian students who perceived better employment opportunities at home tended to return. Cortes (1970) found similar results with Philippine students. Ritterband (1968) also found that foreign students who did not have jobs waiting at

home were more likely to immigrate. Spaulding and Flack (1976) concluded that those who did not expect discrimination or unemployment at home tended to return.

Foreign alumni who had a job waiting at home while they studied in the U.S. tend to get more involved in their countries' development than those who did not (Myer, 1979).

Previous international experience

Selltiz et al. (1963) found that prior foreign experience was positively related to academic and emotional adjustments of foreign students. It appeared to have a positive effect on the extent of social involvement of non-European students with U.S. students. Wilson (1975) found that previous international experience was related to social involvement both with Americans and non-Americans. Roudiani (1976) found that previous international experience was related to world mindedness among foreign students. Hull (1978) found that foreign students who had no previous international experience were more likely to report problems in adjustment to local food, local language, relations with the opposite sex, contact with local people, and recreation. Students who had traveled abroad for more than one month had fewer adjustment problems.

National status accorded

Morris (1960) is perhaps the only investigator who looked into this variable extensively. He found slight support for the relationship between national status variables and adjustment variables. Even though this variable is scarcely investigated other than by Morris, on the basis of sociological perspectives, we decided to include this variable and also to include the individual's perception of his or her status as accorded by others.

Independent variables considered to be highly relevant to needs of foreign students in the literature include: age, sex, marital status, English language proficiency, academic level, sponsorship, major field, length of stay, region of the world and country of origin, size of current enrollment of school, orientation, living arrangement, jobs waiting at home, previous international experience, and prestige accorded to home country.

There were other variables suggested in the literature, but they were excluded from consideration within this present study because they were regarded in the literature as being of lesser importance and/or their inclusion would have necessitated enormous additional space in the questionnaire.

III. THEORETICAL ORIENTATION

Conceptual Framework

In this section, we will discuss how we arrived at the need items used in our questionnaire. We felt it would not be a feasible approach to ask open-ended questions to assess the needs of foreign students, considering our sample size was going to be large. We decided to formulate "need items" to which our respondents could react. Our objectives in formulating need items were: 1) to touch on the cogent needs of foreign students and 2) to include, among others, the areas of needs requested for an inquiry by our sponsoring agency, i.e., relavancy of degree programs, access to extracurricular professional activities, interpersonal relations with U.S. nationals, orientation, and housing.

A common understanding of human beings is that they have various needs and that they tend to behave in order to satisfy those needs. Needs can be divided into two categories: physiological needs and social-psychological needs. Physiological needs are basic to human beings, and there seems to be a general agreement as to the nature of these needs within the literature (e.g. Seidenberg and Snadowsky, 1976; Berkowitz, 1969; and Maslow, 1954).

Social-psychological needs are those which an individual has by virtue of the fact that he or she resides in a social environment and lives in relation to other human beings. Therefore, such needs are principally the result of social learning (Lindgren, 1973), which reflect one's past experience as a member of a society and one's present social milieu. There tends to be greater variation regarding social-psychological needs recognized in the literature. While physiological needs can be modified in their intensity by social learning, social-psychological needs are even more responsive to such modification (Lindgren, 1973).

Since our subject of inquiry was foreign students not as biological organisms per se but as social beings, emphasis was placed on their social-psychological needs more than on their physiological needs. Furthermore, we theorized that foreign students would have diversified social-psychological needs due to their heterogeneous sociocultural backgrounds and current social environments. Therefore, in order for us to identify specific needs of foreign students, we tried to examine those aspects of their cultural background which had provided them with an orientation to daily life and the social system in which they functioned as members (Parsons et al., 1965). Upon this general theoretical perspective, we attempted to identify needs of foreign students.

The social system in which the foreign students were situated was analyzed with the focal point on the students. Merton's (1957) concepts of "status-set" and "role-set" were used to identify the components of the social system of our concern, i.e. a U.S. university or college community. The "status-set" is the complexity of status (i.e. positions) a person occupies by virtue of being a member of a social system, and the "role-set" is a set of roles a person is to play when occupying a position. (We will use

the term "position" instead of "status" in the following discussion, since the latter has a popular connotation of prestige which we wish to avoid in our discussion.)

We identified the following five positions a foreign student may occupy, among other possible positions, by virtue of being enrolled in a U.S. university or college:

1. A student at a college or university.
2. A member of the local U.S. community.
3. A member of one's own family, if married.
4. A member of one's family remaining in the home country.[2]
5. A citizen of one's home country abroad.

Within these five positions, the emphasis was placed upon the positions where one plays various roles in U.S. daily life, i.e. the first three positions.

For each of the first three positions, we recognized a set of major roles one is expected to play as follows:

For Position 1: The role of a student to faculty members, foreign student advisors, and other staff members; the role of a fellow student to U.S. students and to other foreign students from one's own country and from other foreign countries; and the role of a scholarship student to the funding agency.

For Position 2: The role of a foreign sojourner to U.S. residents; the role of a fellow countryman to members of the local group from his country; the role of a neighbor; the role of a customer; and the role of a community member to local officials.

For Position 3: The role of a spouse, the role of a parent, and other familial roles to those with whom one resides, such as one's brothers and sisters.

Even though we chose to emphasize the above three positions and sets of roles, we recognized, to a certain extent, the multiplicity of roles foreign students maintain regarding positions 4 and 5. Such roles include the role of a son or daughter to one's family at home, the role of an employee to the employer at home, the role of a foreign citizen to U.S. immigration officials, and the role of a citizen to the government of one's home country and its representative in the U.S. Some of these roles were also taken into consideration in our study.

Once the roles of foreign students were identified, we attempted to identify their needs with regard to performing those roles. Maslow (1943) ranked basic human needs in the following order of importance: physiological needs (e.g. hunger, thirst); safety needs (e.g. security, order); belongingness and love needs (e.g. affection, identification); esteem needs (e.g. prestige, success, self-respect); and need for self-actualization (i.e. the desire for self-fulfillment).

Our literature search presented us with the following needs of foreign

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[2] We recognize one needs to keep playing these roles even away from one's own family to some extent. However, we limited our immediate concern to the family roles in the U.S.

students as identified or implied by previous studies: 1) academic needs, 2) linguistic needs, 3) other culture-related needs, 4) interpersonal needs, 5) daily-living materialistic needs, and 6) post-return needs. We recognized immediate associations of those needs of foreign students with some of Maslow's basic needs, granting that most of them could be argued as related to all the basic needs. Academic needs are part of self-actualization as well as esteem needs; linguistic needs are relevant to all the basic needs; financial needs and daily-living materialistic needs are at least immediately related to physiological needs and safety needs; and post-return needs are closely related to all the anticipated basic needs. All in all, foreign students' needs as identified in the literature are pertinent to basic needs of foreign students as human beings.

To identify specific needs among the above broad categories of needs, we examined the roles we identified in terms of relevant aspects of the social system in which foreign students were placed and the cultural background which was likely to create needs among them while studying in the U.S.

We developed the following twelve categories of specific need items. Some categories were geared to only a specific position of a foreign student, such as being a univeristy of college student, yet other categories cut across their multiple positions, such as being a member of a local community as well as being a student. Categories[1] were arranged in such a way as to provide a logical progression to the respondent in filling out the questionnaire, rather than analytic conceptualization for the researcher. In selecting need items for each category, we kept in mind the multiple positions a foreign student would occupy and the multiple roles he or she would play along with the needs already recognized in the literature. The following is a brief description of each category.[2]

1. Information needs: this category included need items pertaining to academic information a student would like to obtain upon arrival. We also included other informational needs he or she would feel as a newly arrived member of the local community, such as information about housing, recreational facilities, health care, etc. In addition, we included the culture-related need items, such as information regarding norms of the local community.
2. Degree program needs: this category was limited to the position of a student and its roles. The needs regarding degree program procedure, arrangements and planning were dealt with in this category. The relevant role relationships considered were a foreign student's relationship with his or her academic advisor, other faculty members, other students, and the agency which was sponsoring his or her study in the U.S.

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[1] Since categorization was determined substantively, we recategorized them to arrive at composites. Construction of composites are presented in the section of composite construction in the chapter on methodology, page 38.

[2] Need items in each category are found in Appendix B Questionnaire.

3. Degree program relevancy needs: first of all, we began by examining the meaning of relevancy itself. Needs of foreign students most likely vary, depending on the definition of relevancy. The question of "relevant to what" was primary. We included items for the following variety of ways the U.S. degree program could be relevant to students: a) relevant to one's future job, b) relevant to the current needs of one's home country, c) relevant to future needs of one's home country. In addition, we included other items which were indirectly concerned with relevancy of the program, such as international experience among faculty members and thesis research in one's home country. We limited our consideration to the future and current roles of a student in his or her professional capacity in choosing items for this category.
4. Extracurricular professional activity needs: this category included professional activities mostly of an off-campus nature. These were an immediate part of the degree program and reached beyond what would normally be offered to students as part of one's work experience and attendance at professional meetings. For this category, our concern was limited to the position of a student mainly and, to a lesser degree, a member of the local community.
5. Academic life needs: this category dealt with needs of being a student and the roles associated with it. We included needs regarding academic procedures, such as course requirements and exams; needs regarding others, such as faculty advisors with whom students would form role relationships; and needs regarding academic facilities, such as library materials of an international nature, and office spaces.
6. Financial needs: this category impinged on every role a student could play. Therefore, we attempted to create need items which would uncover financial needs related to the student's life as a whole. Items included varied from a need for money for schooling to a need for finding a job for one's spouse. Some procedural needs such as banking and obtaining a work permit were also included.
7. Needs regarding local community life in the U.S.: this category of needs related to foreign students being also members of a local U.S. community. The question we raised was what students would do as members of a U.S. local community. The items included: needs regarding their daily life, such as food, religious practices and recreational activities; needs in terms of interpersonal relationships with other residents; and some procedure-geared needs, such as income tax, medical care, and insurance.
8. Housing needs: several aspects of housing were considered in formulating need items in this category. Adequacy and furnishing of living quarters, as well as interpersonal relationships in obtaining housing and making arrangements (e.g. living with a U.S. national), and the legal aspects of housing arrangements were included.

9. Family life needs: the need items included in this category were applicable to only those students with spouses and children residing with them. We paid special attention to those needs pertaining to education of spouses and children in the U.S.
10. Interpersonal relationship needs: in every position delineated previously, students would engage in interpersonal relationships with others. In this category we included persons who would be of primary importance to a student living in the U.S. college or university community. They were academic advisors, degree-program committee members (in the case of graduate students), course instructors, foreign student advisors, and other students. The entire category was intended to determine the degree of needs felt by students in formulating good relationships with these persons.
11. Pre-return and anticipated post-return needs: two categories of need items regarding returning home were included. First, we created need items to assess informational needs students might have before returning home regarding shipping and immigration. Included in the second category were needs a student would anticipate after returning home. This category was created in order for us to better understand the type of situation to which students would be returning and types of concerns they might have. This might give us some insight as to why some students fail to return home and why some students would consider their education here as irrelevant. We included needs regarding jobs, salary or wages, housing, research opportunities and facilities, resources and professional materials in respective fields, and continuity in professional growth.
12. Linguistic needs: this category of need items was developed with a view toward importance students might place on various types of linguistic skills. They included comprehension, reading, writing and speaking of English and other related language skills, such as taking class notes. We decided to assess perceived importance and self-evaluation of each skill by respondents.

To account for variation of those needs as perceived by respondents, we chose a number of independent variables to be included in the questionnaire. We identified those independent variables in the course of the literature search: age, sex, marital status, English language proficiency, academic level, sponsorship, major field, length of stay, region of the world, country of origin, size of school, orientation experience, living arrangement, job prospects in home country, previous international experience, and prestige accorded to home country.

Theoretically, students' reactions to the need items we chose would vary due to their heterogeneous sociocultural experiences and current social situations.

We considered that the independent (or predictor) variables selected from the literature represented reasonable measures of experiential and

current situational variations among the students. Sex, age, and marital status were part of these variations. English language proficiency, as measured by TOEFL scores and by self-evaluation, would reflect one's experience (due to the fact one had received language training). In one's current social situation, objective and subjective measures of English proficiency would also be an attribute along with sex, age, and marital status. For a similar interpretation, we considered the academic level would represent part of one's past experience (the fact one had that much schooling experience) and one's current social situation. In addition, we included the grade point averages and perception of barriers in forming personal relationships with others as both experiential and current situational variables.

Furthermore, the length of stay in the U.S. and at the current school of enrollment, the region of the world and the country of origin, orientation experiences, and previous international traveling experiences were part of experiential variables. Other social situational variables included were sponsorship, major field, school size, living arrangement (type of facility and roommate), and perception of prestige accorded to oneself and one's home country. Future plans and intention to return were added as part of the situational variables which we believed to be related to needs.

There are numerous hypotheses which could be tested with variables included in this study. For this report, however, we had to limit our hypothesis testing to the hypotheses which we consider to be of primary interest based on the literature and on our pre-test results.

Hypotheses

The following hypotheses are stated at the general level. For hypothesis testing, each general hypothesis was reduced to several empirical hypotheses by use of operational measures. Need composites created in each category[5] were used as operational measures of various needs along with operational measures of independent variables. The operational measures are found in Appendix B, Questionnaire. The directions are not predicted in the following general hypotheses. However, some of the empirical hypotheses are formulated with directions, i.e. negative or positive relationships between variables, based on our pretest and/or previous studies conducted by others. Major findings are found in the chapter on Findings.

In the following hypotheses, both importance and satisfaction of needs refers to those perceived by the students themselves.

Hypothesis 1: Perceived importance of needs is greater than satisfaction of the same needs.

Hypothesis 2: Importance of educational needs does not differ from importance of other needs.

Hypothesis 3: Satisfaction of educational needs does not differ from satisfaction of other needs.

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[5] See pages 38-45.

Hypothesis 4: Importance of needs varies by sponsorship category of students.

Hypothesis 5: Satisfaction of needs varies by sponsorship category of students.

Hypothesis 6: Importance of needs varies by age of students.

Hypothesis 7: Satisfaction of needs varies by age of students.

Hypothesis 8: Importance of needs varies by sex.

Hypothesis 9: Satisfaction of needs varies by sex.

Hypothesis 10: Importance of needs varies by marital status of students.

Hypothesis 11: Satisfaction of needs varies by marital status of students.

Hypothesis 12: Importance of needs varies by the command of English students have.

Hypothesis 13: Satisfaction of needs varies by the command of English students have.

Hypothesis 14: Importance of needs varies by graduate vs. undergraduate status of students.

Hypothesis 15: Satisfaction of needs varies by graduate vs. undergraduate status of students.

Hypothesis 16: Importance of needs varies by major field of students.

Hypothesis 17: Satisfaction of needs varies by major field of students.

Hypothesis 18: Importance of needs varies by length of stay in the U.S. and at the school.

Hypothesis 19: Satisfaction of needs varies by length of stay in the U.S. and at the school.

Hypothesis 20: Importance of needs varies by the region of the world from which students come.

Hypothesis 21: Satisfaction of needs varies by the region of the world from which students come.

Hypothesis 22: Importance of needs varies by whether or not students participated in an orientation program.

Hypothesis 23: Satisfaction of needs varies by whether or not students participated in an orientation program.

Hypothesis 24: Importance of needs varies by the amount of previous international experience students had.

Hypothesis 25: Satisfaction of needs varies by the amount of previous international experience students had.

Hypothesis 26: Importance of needs varies by whether or not students have jobs waiting for them in home countries.

Hypothesis 27: Satisafaction of needs varies by whether or not students have jobs waiting for them in home countries.

Hypothesis 28: Importance of needs varies by school size.

Hypothesis 29: Satisfaction of needs varies by school size.

Hypothesis 30: Importance of needs varies by living arrangements of students.

Hypothesis 31: Satisfaction of needs varies by living arrangements of students.

Hypothesis 32: Importance of needs varies by prestige accorded to one's country.

Hypothesis 33: Satisfaction of needs varies by prestige accorded to one's country.

V. METHODOLOGY

In this chapter, we will present the sampling procedure, means of data collection, and construction of composites.

The Sampling Procedure

The population of this study was defined as all the foreign students from developing nations who: 1) were studying toward an academic degree at U.S. colleges and universities; 2) had spent at least one regular academic quarter or semester at the school where they were enrolled at the time of sampling; and 3) were enrolled at colleges and universities that had at least 300 foreign students attending.[6]

To decide what consistitutes a developing nation, we relied on the list of developing nations provided by A.I.D. In addition, with the approval of NAFSA and A.I.D., we included Iran, Iraq, Libya, Taiwan, and Turkey based on their similarity to the A.I.D.-defined developing nations in terms of social and economic indicators (World Bank, 1977). A total of 102 nations were included in this survey.

Selection of Schools

We were obliged to include as many students sponsored by A.I.D. as possible in this study. A.I.D.-sponsored students, however, were not uniformly distributed among schools in the nation. Hence, obtaining a large number of them required sampling the schools that had many A.I.D. students more heavily than those schools that had few A.I.D. students. Therefore, the schools were divided into three strata on the basis of A.I.D. student enrollment. In stratifying schools, we used the data presented in *Open Doors/1977-1978* (Julian et al., 1979) and the information provided by A.I.D. We used 1978 data to estimate 1979 enrollment for the sampling purposes. According to our research design (Lee et al., 1979), we first stratified schools into five approximately equal strata by A.I.D. enrollment. Then we combined the bottom three strata to form Stratum III for the cluster sampling, while the first and second strata became Strata I and II respectively. The resulting stratification of schools and estimated numbers of students in each strata are presented in Table 1.[7]

We applied different cluster sampling rates to the three strata to ensure a large number of A.I.D. students in the sample. As stated in the research design (Lee et al., 1979), we chose 18 schools (clusters) from Stratum I and six schools each from Strata II and III. Schools were chosen within each stratum by systematic sampling techniques with a probability

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[6] The reasons for these restrictions were presented in the Phase I report (Lee et al., 1979).

[7] Figures in Table 1 differ from the estimated numbers in our research design. This discrepancy arises because Table 1 is based on 1977/1978 data, while the estimated numbers in the research design were based on 1976/1977 data.

proportionate to size.[a] Before sampling, schools within each stratum were arranged according to geographic location in the U.S. in order to ensure fair representation of the different regions in the sample.

Table 1. The Estimated[a] Distribution of Clusters and Students in the Survey Population

Strata	Estimated Number of A.I.D. Students per Cluster	Estimated Number of Clusters (Schools)	Estimated Number of Students	
			Total	A.I.D. Students
Stratum I	20 and over	35[b]	40,037[c]	1,461
Stratum II	7-19	37	33,522	451
Stratum III	6 or less	97	60,367	89
Total		169	133,926	2,001

a. Estimated with the 1977/1978 data in **Open Doors** (Julian et al, 1979) and information provided by A.I.D.

b. Originally there were 36 schools in Stratum I including Iowa State University. Since ISU students were surveyed in Phase I, we deleted them from the population of Phase II.

c. Including A.I.D. students

Selection of Students within Each School

1. Securing the list of students

Once the schools were chosen, we contacted the office of foreign student advisors at each school. A letter was sent, stating the objectives of this project and asking their cooperation. We asked each office to provide us with a list of foreign students enrolled at their school as of Spring, 1979. Follow-up letters were sent to those who did not respond; those who did not respond after the follow-up letter were contacted by telephone. (The first list came to us as early as mid-April, and the last one as late as mid-September, 1979.) Due to a variety of school regulations, we received three types of responses:

a. Most of the foreign student advisors expressed their willingness to participate in the study and subsequently sent us lists of foreign students enrolled at their schools (referred to as "inhouse sampling schools.")

b. Foreign student advisors at six schools expressed their willingness to participate in the study, but declined to provide a list of their students. They were willing to draw samples from their students and mail the questionnaires. We decided to accept their offer and send them the necessary instructions (referred to as "outside sampling schools.")

c. Foreign student advisors at three schools were unwilling, for a variety of reasons, to participate in the study. Their schools were dropped and replaced by other schools. In choosing the substitutes,

[a] The sampling procedure used is known as a multi-stage cluster sampling with probability proportionate to size. At each stage of sampling, a systematic sample was taken with stratification of certain characteristics for sampling units. (For a technical discussion of this sampling procedure, see, for example, Kish, 1965, or Babbie, 1979.)

we decided to impose the restrictions that the substitute must be from the same stratum and located in the same geographic region as the original school. Foreign student advisors at the newly chosen schools were contacted and their cooperation was secured.

2. Preparing the sampling frame for each school

According to our approved plan, we were to use three different sampling rates within each school. One rate was to be applied to A.I.D. students, the second rate to students from Iran and Taiwan, and the third rate to the remaining students from developing nations. The technical rationales for using the three different rates were given in the Phase I report (Lee et al., 1979). We were also to stratify the students by country of origin before we took the systematic sample in order to have fair representation of countries proportionate to the number of students from each country.[9] In stratifying students by country of origin, countries with less than ten students on campus were grouped together. In view of the above considerations, we proceeded to prepare the sampling frame (list) as follows: 1) the names of non-degree students and practical trainees were excluded; 2) the names of students from developed nations as well as the oil-rich countries of Kuwait and Saudi Arabia were deleted; 3) A.I.D. sponsored students were identified; 4) students from Iran and Taiwan were identified, and 5) students from the remaining countries were identified, whenever their number exceeded nine.[10]

3. Sampling the students

The decision as to the initial sample size for each stratum was made with several considerations in mind. First, data were to be collected in Fall, 1979 using a Spring 1979 list. Many students on the lists were expected to graduate or leave before data collection, possibly one-fourth of the students on each list. Therefore, the initial sample size should be large enough to compensate for those who could not be reached. Second, we did not anticipate the return rate to exceed 50 percent based on our pretest. Among "outside sampling schools", the best return rate we could anticipate was one third, due to the difference in the procedure.[11] Therefore, we needed to draw a larger initial sample at an outside sampling school. With those considerations, we decided to draw initial subsamples as follows:[12] 80 students

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[9] In our research design, we also proposed to stratify students by undergraduate and graduate. However, most of the lists we received did not include classification. Therefore, we had to abandon stratification by classification in our sampling.

[10] One list did not show countries of origin. We used judges, those who were knowledgeable of names in Iran and Taiwan, to identify students from these countries. For other countries, only in this particular list, we took a sample without stratifying by country other than Taiwan and Iran. We also applied a larger initial sample for this school, since we intended to remove questionnaires filled out by students from those countries excluded above.

[11] We considered asking foreign student advisors at those schools to keep records of returns would be out of the question due to the amount of work and time needed to do so. We decided to ask them to make only the first two contacts out of the four planned.

[12] Since we used multi-stage cluster sampling with probability proportionate to size within each stratum, we were able to draw an equal subsample from each cluster within a stratum.

at each of the eighteen[13] schools in Stratum I (120 for the "outside sampling schools"), 230 students at each of the six schools in Stratum II (340 for the "outside sampling schools"), and 285 for each of the seven[14] schools in Stratum III (428 for the "outside sampling schools").

From each prepared sampling frame (the list of students), we selected all the A.I.D. students participating in degree programs. Among the remaining, a systematic sample (see, for example, Kish, 1965) was drawn for each school with stratifications by country of origin. The number of students remaining on the list, counting the students from Iran and Taiwan as one half of the actual numbers, was divided by the initial subsample size mentioned above. If the outcome included a fraction, it was rounded off to the lower integer. That number became the sampling interval at each school. Due to rounding off in the computation of the sampling interval, the initial sample sizes varied slightly among schools in the same stratum and were greater than the planned initial subsample sizes. The sampling interval was twice as long for students from Taiwan and Iran.[15]

The distribution of the total number of schools and the number of schools chosen by strata and geographic location within the U.S. is presented in Table 2. Table 3 presents the number of students chosen for each stratum. In order to ensure the anonymity of students and schools in this study, we will not identify the sample by school.

The A.I.D. sample size from the seventeen schools in the first stratum was considerably smaller than we had expected. This was mainly because many of the names on the A.I.D. list did not appear on the schools' lists. In order to increase the A.I.D. sample, we decided to include all A.I.D. students who were in the remaining schools in Stratum I. Consequently, all the A.I.D. students in Stratum I were chosen as part of our sample. To reach these "supplementary" A.I.D. students, we depended on the A.I.D. list of April, 1979, and contacted them directly, first through foreign students advisors' offices[16] and later through their respective departments.

As described above, we applied different sampling rates to different strata, and to different substrata (A.I.D. students, students from Taiwan and Iran, and the rest) within each cluster (school). Also due to rounding off in computation of the sampling interval, the sampling rate varied slightly from school to school within the same stratum. For data analyses,

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[13] One of Stratum I schools declined participation after lengthy negotiation on our part. Therefore, we had 17 schools in the first stratum. By the time we came to the conclusion that this particular school would not participate in the survey, it was too late for us to contact another school.

[14] One of the schools originally chosen in Stratum I did not have enough A.I.D. participants on their 1979 list, so it was reclassified into Stratum III. Therefore, we had seven schools in Stratum III. Another school was added to Stratum I.

[15] The decision to apply one-half of the sampling rate to students from Iran and Taiwan was made in our research design due to their extremely large numbers among foreign students. Thus, we were able to include more students from other countries.

[16] Overall, we received a great deal of assistance from those offices for which we were very grateful.

Table 2. The Sampled Schools by Geographic Locaton within the U.S. and Stratum[a].

Stratum	Stratum I		Stratum II		Stratum III		Total	
Region	No. of Schools in the Region	No. of Schools Chosen	No. of Schools in the Region	No. of Schools Chosen	No. of School in the Region	No. Schools Chosen	No. of Schools in the Region	No. of Schools Chosen
North East	13	8	21	3	42	2	76	13
North Central	2	1	1	1	1	0	4	2
North West	2	1	2	1	3	1	7	3
South East	3	1	5	1	9	1	17	3
South Central	9	3	5	0	21	2	35	5
South West	6	3	3	0	21	1	30	4
Total	35	17[b.]	37	6	97	7[c.]	169	30

a. Stratum I: Schools with more than 19 A.I.D. students enrolled.
Stratum II: Schools with between 7 and 19 A.I.D. students enrolled.
Stratum III: Schools with less than 7 A.I.D. students enrolled.

b. Originally, we had 18 schools, one of which declined participation belatedly. It was one of the North Eastern schools.

c. Originally, we had six schools. One school chosen in Stratum I was reclassified into Stratum III due to a drastic change in its A.I.D. student enrollment. It was a South Central school.

the above needed to be taken into account in order to arrive at population estimates. Weights were used to make adjustments for different sampling rates under the guidance given by a survey sampling specialist at the Department of Statistics, Iowa State University (Fuller, 1979). In data analyses, where deemed necessary, Super Carp (Hidiroglou et al., 1979) was used. Super Carp is a statistical program that takes strata and clusters in the sample into account in computation of population parameter estimates in statistical analyses.

Table 3. The Numbers of Students Chosen in Each Stratum

Stratum	Number of Schools Chosen	Non-A.I.D. Students	A.I.D. Students	Total
I	17	1,873	576	2,449
	(18)[a]		412	412
II	6	1,486	68	1,554
III	7	2,099	9	2,108
Total	30	5,458	1,065	6,523

a. Supplementary A.I.D. students were added from the remaining schools in Stratum I.

Data Collection

Thirty schools were selected according to the procedure described in the section on sampling. We contacted those thirty schools in March, 1979, with a letter introducing the NAFSA project and its objectives to the foreign student advisors.

Six schools declined to provide the in-list of students due to school regulations. Instead, they agreed to assist us by sampling according to our instructions and mailing out questionnaires and follow-up postcards to the students on their campuses ("outside sampling schools"). The remaining twenty-four schools sent us their lists of students which arrived from April through September 1979 ("in-house sampling schools"). In addition, we decided to contact all the A.I.D. students in the remaining Stratum I schools (the "A.I.D. supplementary group").[17]

In all three approaches, we used a mail questionnaire (See Appendix B, Questionnaire). The differences were in the methods of contacting the students.

For "outside sampling schools", the foreign student advisors at each school drew a sample of students and made the first two contacts as stated below with our instructions. For both contacts, first class mail was used in order to obtain the most returns with only two contacts.

For "in-house sampling schools", we drew a sample of students for each school from the list provided to us by the foreign student advisors. To this group of students, we made four (in some cases five) contacts as listed below. The first two contacts were mailed by the bulk rate and the remaining three by first class. The bulk rates were selected initial-

[17] The reason for adding this group is presented in the section on sampling procedure, page 29.

ly for economical reasons, since our initial sample size was large and the bulk rate was about one-tenth of the first class rate. We hoped to reach as many students as possible with the first two contacts by bulk rate and then later change to first class rate. The switch to first class was determined due to the fact that: 1) the lists were outdated and 2) the bulk rate does not guarantee services of forwarding and returning to the sender.[18]

For "the A.I.D. supplementary group", we contacted all the A.I.D. students on the A.I.D. list of April 1979, who were enrolled in the remaining schools in Stratum I. All five contacts were carried out by first class mail. In addition, "Address Correction Requested" was printed on the envelopes for this group. We used the first class rate for all the five contacts along with the "Address Correction Requested" in order to increase our chances of reaching this group of students at the correct addresses. However, the address correction request was effective only in a very few locales.

The five contacts made were as follows:[19]

1. First contact: a copy of the questionnaire was sent to the respondents with a letter of introduction to the research project.
2. Second contact: a reminder postcard was sent approximately ten days after the first contact to all the persons in the sample.
3. Third contact: a second copy of the questionnaire, with an accompanying letter, was sent to the respondents who had not replied approximately two weeks after the second contact was made.
4. Fourth contact: a second reminder postcard was sent approximately ten days after the third contact to those who had not as yet replied.
5. Fifth contact: a third questionnaire was sent two weeks later to the sample from eight schools which had very low response rates.

The original proposal had called for four contacts. However, in an effort to increase our final useable sample size, we considered the following situational factors and made the fifth contact with selected schools.

1. The "recency" of lists varied from school to school, even though we asked for spring term lists.
2. Mail services differed greatly by locale. In a very few locales our "Address Correction Requested" elicited some response. In many locales, there was none.
3. By observing the response rates in late November, we noticed they differed among schools according to the above two factors. In some cases, at that time, the response rate was as projected in the proposal (50%); in others, it was quite low. We concluded that in

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[18] We proposed to use bulk rate mail for all the contacts in our research proposal. Data collection was delayed until fall due to the delayed starting of the project. This change made it inevitable for us to use the first class mail to take advantage of forwarding services, since in many cases, spring addresses were no longer correct.

[19] Selected responses were checked in terms of waves (different contacts). No significant differences were found by waves.

some locales, our first and second contacts (sent as bulk rate) had not reached all the intended students.

Therefore, we decided to make a fifth contact among students in the eight lowest schools in terms of return rates at the end of November. In addition, we also decided to contact our A.I.D. supplementary group for the fifth time.

"Inhouse sampling schools" were divided into two mailing sets. In the first set were the schools which started the fall school term in late August or early September, 1979, and in the second set were the schools which started the fall term in late September. Among 24 "inhouse sampling schools", fifteen schools fell into the first set and the remaining nine schools became the second set.

The first contact was made about two weeks after the average starting date of the fall term in each set. We began contacting in late September with the first set and in mid-October with the second set and the A.I.D. supplementary groups, and concluded data collection in December, 1979. The period between the first and the second contact was extended, when we realized that the bulk rate mails tended to get held at the post offices as lower priority mails.

The response rates varied from school to school and by procedure categories. Among "inhouse sampling schools", the response rates ranged from 23.2% to 64.6%, with an average return rate of 42.8%. Among "outside sampling schools", the rate ranged from 13.5% to 40.2% with an average return rate of 27.9%.[20] These rates were underrated rather than overrated, since we suspected numerous questionnaires had not reached respondents nor were they returned to us. Five schools exceeded the expected return rate of 50% among the "inhouse sampling schools", and two of the "outside sampling schools" exceeded our expected return rate (33.4%).

The return rate of the A.I.D. supplementary group was 54.6%. However, the most serious drawback of this group was the high number of undeliverable cases due to the dated character of the list. Fourty-four percent of the persons we contacted could not be reached, mostly because they had gone home. In the case of the school lists, about twenty percent of the sample were returned to us as undeliverable.

We had gathered 1,857 useable cases at the end of data collection which included 322 A.I.D. students. Altogether 30 schools participated in this survey.[21] (See Table 4.)

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[20] The return rate was computed as (no. of responses) / (the initial sample size - no. of undelivered cases) x 100. Undelivered cases were considered as mislistings. Undelivered cases are mostly those who left the U.S.

[21] Unfortunately, one of the outside sampling schools in Stratum I was considerably behind in data collection due to extenuating circumstances. Consequently, we could not include the result of this school in this report. In our future publications, however, we will include this school's results.

Table 4. Sample: Initial Contacts and Responses

Strata	Initially Contacted	Undelivered & Returned[b]	Responded A.I.D.	Responded Non-A.I.D.	Total Responded	Rate of Response[c]
pp.	2449	513	210	578	788	40.7%
I (A.I.D. supplementary)	412	302	88	---	88	80.0%
II	1554	311	30	512	542	43.6%
III	2108	415	5	486	491	29.0%
Total	6523	1540	333	1576	1909	38.3%

a. The figures include one school whose data arrived too late to be included in this report. The total sample size for this report was 1857. Later, data from this school was added in Phase III.

b. These figures are included in initial contact figures.

c. A response rate was computed as total responded / (number of initially contacted - undelivered) x 100. These rates include outside sampling schools.

Composite Construction

Categories of need items in the questionnaire were formed on the basis of substantive considerations as described in Conceptual Framework, page 21, and the assumed logical order on the part of respondents. Therefore, for our data analysis,[22] to formulate composites each of which would include unidimensional items, factor analysis was conducted using the pretest data. The importance scores of need items were factor analyzed. A number of composites were formulated corresponding to the number of factors uncovered by the analysis. Each need item was assigned to the composite on which it had the highest loading. Items that did not load on any of the factors strongly enough were excluded from composite formulation. Composition of each factor was further examined from a substantive point of view, whether or not it made sense to have the items together as a composite. Then, we computed Cronbach's Alpha to ensure reliability of each composite.[23] The reliability values are presented in Table 5. (The following need items are taken directly from the questionnaire in Appendix B).

Information Needs

Factor analysis of the 24 items in this category indicated that there were three factors referring to distinct dimensions. The three composites resulting from this were university information, community information, and foreign student life information.

1. Needs for university information. This composite consisted of seven items pertaining to various types of information about university rules. These items were:
   Need to have information about . . .
   a. The registration procedure.
   b. The procedure to begin your degree program.
   c. Examination requirements and regulations for a degree.
   d. English language requirements.
   e. The efficient use of the library.
   f. The role of the academic advisor.
   g. The role of the major professor.
2. Needs for community information. This composite consisted of eight items pertaining to various types of information about local community living. These items were:
   Need to know . . .
   a. How much it costs to live here.
   b. Housing facilities.
   c. Housing costs.
   d. Recreational activities available on campus.

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[22] The program used for the factor analysis was PA2 in SPSS (Nie et al., 1975).

[23] Alpha was computed using SPSS reliability program (Hull and Nie, 1979). The minimum Alpha of .60 was considered to be acceptable. Alpha values were computed again with part of national data which were from schools similar to the pretest schools (Warren, R., 1979).

e. Recreational activities available off campus.
f. Health services available.
g. Health insurance available.
h. Ways of doing things in the U.S.

3. Needs for foreign student life information. Three items related specifically to needs for foreign students living in the U.S. These items were:
   Need to know . . .
   a. Community services available to foreign students and their families.
   b. Availability of foods and spices you are accustomed to using.
   c. Information on sponsors' rules about families, medical care, and traveling.

Degree Program Needs

The fourteen items related to the degree program were subjected to factor analysis. Consequently two composites were formulated.

1. Needs regarding academic planning. This composite included three items pertaining to having one's degree program formed. These items were:
   Need for . . .
   a. Having an academic advisor assigned to you before your arrival.
   b. Receiving credit for academic work done at home.
   c. Sharing responsibility in planning your degree program with your academic advisor.
2. Needs regarding academic relationships. This composite included four items that described various interpersonal relationships essential for developing one's degree program. These items were:
   Need for . . .
   a. Having your academic advisor available when needed.
   b. Having faculty members spend enough time with you.
   c. Having faculty members with international experience to guide you.
   d. Opportunities to do some teamwork with American students.

Academic Program Relevancy Needs

Factor analysis of the eleven items in this category resulted in two composites.

1. Needs for relevancy of education. Seven items regarding relevancy of U.S. education to various conditions at home were included in this composite. These were:
   Need for . . .
   a. A program relevant to your future job in your country.
   b. A program relevant to the present needs of your country.
   c. Level of technology applicable to the future of your country.

d. Obtaining basic knowledge in your area of study.
e. Having international materials included in courses.
f. Training to apply knowledge.
g. Exchange of visiting professors between universities of your country and those in the U.S.

2. Needs for training to apply knowledge: Three items that described various aspects of training to apply knowledge to real world situations were in this composite. These were:
   Need for . . .
   a. Training for leadership role.
   b. Training to introduce change(s) in your country.
   c. Seminars with students from several departments to deal with problems of national development.

Extracurricular professional activity needs

Factor analysis showed two underlying factors among the five items in this category. The composites created because of this result were as follows:

1. Needs for extracurricular learning opportunities. The three items included were related to extracurricular activities for gaining or exchanging knowledge. These items were:
   Need for . . .
   a. Opportunities to give information about your country in educational situations.
   b. Opportunities to attend off-campus professional meetings.
   c. Learning how universities provide assistance to local communities.
2. Needs for practical experience. Two items in the composite pertained to activities involving practical experience. These were:
   Need for . . .
   a. Opportunities to put into practice what you learn in class.
   b. Work experience in your field before returning home.

Academic Life Needs

The items in this category were subjected to factor analysis and, as a result, formed two composites.

1. Needs regarding university environment. Six items included in this composite pertained to academic environment and regulations. These were:
   Need for . . .
   a. Understanding the grading system.
   b. Understanding course requirements of instructors.
   c. Opportunities to discuss course work with faculty members.
   d. Getting adequate advice from your academic advisor.
   e. Being respected as a fellow human being by U.S. students.

f. Having magazines and newspapers from your country available in the university library.

2. Needs for facilitating course work. The items included were:
   Need for . . .
   a. Being able to take class notes well.
   b. Having extra time in taking exams to compensate for language difficulty.
   c. Having opportunities to discuss course work with U.S. students.
   d. Having publications in your area of study from your country available in the university library.

Financial Needs

Ten of the items included in this category formed one composite as a result of factor analysis. These items were:

Need for . . .

a. Having enough money for school.
b. Having enough money for basic living expenses.
c. Having enough money to receive necessary medical care.
d. Receiving money from your sponsor without delay.
e. Getting help in banking.
f. Getting help from student financial aids.
g. Finding a part-time job.
h. Finding a part-time job at the university related to your degree program.
i. Finding a job for your husband or wife.
j. Getting a work permit for off campus jobs.

Community Life and Interpersonal Relationship Needs

Items under these categories were grouped into three underlying factors by factor analysis. They were identified as needs regarding living in a U.S. community, needs for sharing activities with U.S. nationals, and needs for interaction with faculty and staff.

1. Needs regarding living in a U.S. community. The ten items included were:
   Need for . . .
   a. Getting accustomed to U.S. food.
   b. Observing religious practices.
   c. Being able to behave according to one's values and beliefs.
   d. Having sufficient time for social and recreational activities.
   e. Feeling welcomed by U.S. nationals in the local community.
   f. Having U.S. nationals correctly informed about your country.
   g. Having local people treat foreign students courteously.
   h. Obtaining medical care.
   i. Obtaining medical insurance.
   j. Knowing income tax regulations.

2. Needs for activities with U.S. nationals. The six items included in this composite were:
   Need for . . .
   a. Having recreational activities with U.S. nationals.
   b. Visiting U.S. families.
   c. Sharing housing with U.S. nationals.
   d. U.S. friends.
   e. U.S. friends with whom you can discuss personal problems.
   f. Social activities with U.S. nationals.
3. Needs regarding relationships with faculty and staff. Five items referring to interaction with members of faculty and staff were included in this composite. The items were:
   Need for . . .
   a. A good relationship with your advisor.
   c. Good relationships with the degree program committee members.
   c. Good relationships with course instructors.
   d. A good relationship with your foreign student advisor.
   e. Friendly treatment by other university staff members.

Housing Needs

As the result of factor analysis, six items in this category formed one composite. The items included were:

Need for . . .
a. Having adequate housing facilities on campus.
b. Having adequate housing facilities off campus.
c. Obtaining necessary furniture at a reasonable cost.
d. Borrowing necessary furniture.
e. Getting housing you want without discrimination.
f. Being informed about legal rights and duties when you sign a contract.

Family Life Needs

Factor analysis indicated two distinct factors underlying the seven items included in this category. Therefore, two composites were formed corresponding to these factors. The resulting composites dealt with needs of spouses and needs of the family.

1. Needs of the spouse. Three items related specifically to the needs of the accompanying spouse were included in this composite. They were:
   Need for . . .
   a. Finding enough activities for your spouse.
   b. English language training for your spouse at a reasonable cost.
   c. Appropriate educational opportunities for your spouse.
2. General family needs. The remaining four items in this category were included in this composite. They were:

Need for . . .

a. Social activities which include children.
b. Finding appropriate child care.
c. Finding appropriate educational opportunities for children.
d. Getting to know U.S. neighbors.

Pre-return Needs

The three items which formed a composite were those pertaining to information which might be needed when one would be preparing to return home. They were:

Need for . . .

a. Knowing how to send books and household items home.
b. Knowing information, in advance, on tax clearance regulations, sailing permit, etc.
c. Knowing the cheapest means of transportation to return home.

Anticipated Post-return Needs

As a result of factor analysis on eleven items in this category, two composites were formed. One composite consisted of needs one would anticipate having with regard to material rewards in their home country; the other included needs one would anticipate having for opportunities and facilities in one's profession upon return.

1. Anticipated post-return needs for material rewards. Three items were included in this composite. They were:

   Need for . . .

   a. Finding a job appropriate to your training.
   b. Receiving adequate salary and wages.
   c. Finding appropriate housing.
2. Anticipated post-return needs for professional opportunities and facilities. The eight items included in this composite were:
   a. Having funds for research.
   b. Having facilities to use U.S. training in future jobs.
   c. Having resources to use U.S. training in future jobs.
   d. Receiving the latest professional materials in the field.
   e. Visiting outside your country at intervals to keep in contact with scholars in your field.
   f. Having scholars visit your country for professional consultations.
   g. Publishing in professional journals abroad.
   h. Publishing in professional journals in your country.

Linguistic Needs

A list of eight English skills was included. Respondents were asked to indicate the importance of each skill to them. Factor analysis indicated that these eight skills shared one underlying factor, therefore they formed one composite, i.e. needs for English language skills. The skill items were:

a. Understanding spoken English.

b. Giving an oral presentation.
c. Reading (textbooks, journals, etc.)
d. Writing papers and theses.
e. Taking tests.
f. Taking class notes.
g. Participating in class discussion.
h. Conversing with faculty members and other students.

Each need composite was the sum of important scores of individual need items included in each composite. Corresponding to each need composite, the satisfaction composite was also computed. Corresponding to the category of linguistic needs, we formulated two composites; one was to measure self-evaluation of the English language skills, and the other was to measure evaluation of remedial English language courses with regard to improving respondents' skills.

In addition to the need importance and satisfaction composites, we developed composites pertaining to goals and barriers by factor analyzing the items in these categories.

Goals

Factors analysis resulted in two goal importance composites. One was to measure importance students placed on primary goals in coming to the U.S., and the other was to measure importance placed on secondary goals. Primary goals were immediate education goals one would try to achieve by coming to the U.S., and secondary goals could be considered as peripheral to the formalized degree program.

1. Primary goals. The three items included in this composite were:
   a. Obtaining a degree.
   b. A broad education.
   c. Specialized skills and knowledge in your field.
2. Secondary goals. Seven items included in this composite were:
   a. Developing research skills.
   b. Improving your command of English.
   c. Gaining practical experience in your field.
   d. Getting to know U.S. professionals in your field.
   e. Seeing different parts of the U.S.
   f. Learning about the U.S.
   g. Broadening your view of the world.

Barriers

A set of items were included in this study to assess the extent to which those items were viewed as barriers in establishing good relationships with U.S. nationals by students. As the result of factor analysis, a composite was formed with the following eight items:

a. Your religious background.
b. Your racial background.
c. Your cultural background.

d. Your political view.
e. Your being a foreigner.
f. Your attitude toward others.
g. Their attitude toward you.

Table 5 presents composites and their reliability scores.

Table 5. Composites

Composite Names	Number of Items in the Composite	Reliability[a]	Composite Names	Number of Items in the Composite	Reliability
Needs for university information (C1)	7	.83	Satisfaction of the above (C28)	6	.78
Satisfaction of the above (C2)	7	.85	Needs regarding relationships		
Needs for community information (C3)	8	.85	with faculty and staff (C35)	5	.86
Satisfaction of the above (C4)	8	.86	Satisfaction of the above (C36)	5	.84
Needs for foreign student life information (C5)	3	.64	Housing needs (C29)	6	.84
Satisfaction of the above (C6)	3	.64	Satisfaction of the above (C30)	6	.83
Needs regarding academic planning (C7)	3	.70	Spouse's needs (C31)	3	.72
Satisfaction of the above (C8)	3	.47[a]	Satisfaction of the above (C32)	3	.76
Needs regarding academic relationships (C9)	4	.79	General family needs (C33)	4	.76
Satisfaction of the above (C10)	4	.71	Satisfaction of the above (C34)	4	.84
Needs for relevancy of education (C11)	7	.84	Pre-return information needs (C39)	3	.79
Satisfaction of the above (C12)	7	.81	Satisfaction of the above (C40)	3	.85
Needs for training to apply knowledge (C13)	3	.71	Anticipated post-return needs for material rewards (C41)	3	.83
Satisfaction of the above (C14)	3	.69	Anticipated satisfaction of the above (C42)	3	.77
Needs for extracurricular learning opportunities (C15)	3	.71	Anticipated post-return needs for professional		
Satisfaction of the above (C16)	3	.71	opportunities and facilities (C43)	8	.93
Needs for practical experience (C17)	2	.84	Anticipated satisfaction of the above (C44)	8	.92
Satisfaction of the above (C18)	2	.84	Importance of primary goals in coming		
Needs regarding university environment (C19)	6	.86	to the U.S. (C45)	3	.79
Satisfaction of the above (C20)	6	.67	Likelihood of achieving the above (C46)	3	.71
Needs for facilitating course work (C21)	4	.67	Importance of secondary goals in coming		
Satisfaction of the above (C22)	4	.61	to the U.S. (C47)	7	.84
Financial needs (C23)	10	.88	Likelihood of achieving the above (C48)	7	.81
Satisfaction of the above (C24)	10	.89	English language importance (C49)	8	.91
Needs regarding living in a U.S. community (C25)	10	.82	English language proficiency (C50)	8	.89
Satisfaction of the above (C26)	10	.80	Usefulness of remedial English courses (C51)	8	.95
Needs for activities with U.S. nationals (C27)	6	.83	Barriers in establishing good relationships (C52)	7	.84

a. Reliability scores are Cronbach's alpha values computed by SPSS program (Nie et al., 1975). An alpha value less than .60 is not satisfactory for a set of items to form a composite (Warren, 1979).

Statistical Analysis

Differential sampling rates were applied to the population according to strata, clusters, and substrata (A.I.D. students from Taiwan and Iran, and the rest).[24] Therefore, observations needed to be weighted in order for them to properly represent the population. Weights were computed through consultation with a survey sampling specialist at the Department of Statistics, Iowa State University (Fuller, 1979). Readers may wish to contact the author for details.

We employed the service of a computer scientist for an algorithm of SUPER CARP (Hidiroglou et al., 1979) to be transferred into the SAS system. This operation was necessary in order to obtain unbiased estimators of variances and standard errors of means. Population means were also estimated with the same technique. SUPER CARP was developed by Prof. Fuller and his associates at the Department of Statistics, Iowa State University. It can compute variances for a sample with strata and clusters such as ours, while other known programs such as SAS and SPSS are not able to do so.

In testing hypotheses where independent variables were categorical measures, Fisher's unprotected LSD procedure was used to compare means between categories of students (Ott, 1977: 384-385). To determine significance of the test results, we used .01 level rather than .05 level (Warren, 1980), since our extremely large sample size tends to produce statistically significant results even when the results may not have substantive significance. Taking a higher level of statistical significance, we attempted to fill the gap between these two types of significance, especially when our interest is to determine whether or not substantive differences existed among students in terms of needs.

Where independent variables were not categorical or nominal, we used correlation coefficients to identify associations between dependent variables (need composites) and independent variables. Use of correlation coefficients should be regarded as a preliminary analysis. Due to our large sample size, even a small coefficient was statistically significant such as r of only .05. However, such a small coefficient substantively suggests the absence of a correlation between the two variables. Therefore, as far as correlation coefficients are concerned, we will report the results from a substantive point of view. Even though most of the coefficients were statistically significant, we will report only those where one variable accounted for less than 10% but more than 5% of variance in the other ($r > .2236$) and 10% or higher ($r > .3162$). We consider this approach to be much more meaningful than reporting statistical significance of popular levels, when the size of the sample is extremely large (Warren, 1980).

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[24] For the details of sampling, see the seciton on sampling procedures in Phase II final report page

V. FINDINGS

In this chapter, the results of data analysis will be presented. First, the results of univariate analyses will be given. Second, the results of hypothesis testing will be reported. Third, bivariate analyses of other variables besides need composites will be presented.

Univariate Analyses

The following are univariate tables. All the tables present population estimates which were computed with use of weights. Frequencies with weighted observations are artificially large and might be misleading, therefore only percentages and appropriate statistics (means and standard errors of means), where applicable, are reported in the tables.

Tables 6 through 13 present the data of need items. Table titles coincide with the headings used in the questionnaire (Appendix B). Each table contains weighted percent distribution, estimators of means and standard errors of means. The composites constructed out of these next items will be discussed in the following section on hypothesis testing.

Table 14 shows the data on importance of goals students might have wished to achieve and their assessment of likelihood in achieving those goals when they were leaving their countries for the U.S. Overall, primary academic goals scored high, the highest being the goal of "obtaining the degree." Rated of least importance was the goal of learning about the U.S. Students were quite optimistic about achieving their primarily academic goals, particularly obtaining the degree. However, we also note the lowest mean score was for the likelihood to "get to know U.S. professionals in your field." These items were divided into two importance composites and two satisfaction composites. We consider the importance placed on goals reflecting needs of students when they were leaving for this country, and the perceived likelihood of achieving them as being a reflection of their satisfaction of the progress toward achieving them. Therefore, the composite of importance of goals and perceived likelihood of achieving them will be presented along with the need composites in the section on hypothesis testing.

Among all the need items presented in Tables 6-14, the ten most important items (listed from the highest) were:

1. Need for having enough money for basic living expenses.
2. Goal of obtaining the degree.
3. Goal of obtaining specialized skills and knowledge in your field.
4. Need for enough money for school.
5. Need for enough money for necessary medical care.
6. Anticipated need for finding a job appropriate to your training upon returning to the home country.
7. Goal of gaining practical experience in your field.
8. Need for work experience in your field before returning home.
9. Need for training to apply knowledge.

10. Anticipated need for receiving the latest professional materials in the field.

The least important items (listed from the lowest) were:

1. Need for having another student to help you with your study.
2. Need for information about dating behavior with U.S. nationals of the opposite sex.
3. Need for getting accustomed to U.S. food.
4. Need for observing your religious practices.
5. Need for borrowing necessary furniture.
6. Need for recreational activities available off campus.
7. Need for sharing housing with U.S. nationals.
8. Need for information about English courses for foreign students.
9. Need for information about available food and spices you are accustomed to using.
10. Need for learning how universities provide assistance to local communities.

With regard to satisfaction of needs, the ten most satisfied need items were:

1. Goal of obtaining the degree.
2. Goal of obtaining a broad education.
3. Goal of obtaining specialized skills and knowledge in your field.
4. Need for information about the registration procedure.
5. Goal of broadening your view of the world.
6. Need for information about the efficient use of the library.
7. Need for obtaining basic knowledge in your area of study.
8. Need for information about clothes needed.
9. Need for understanding course requirements and instructions.
10. Need for information about the procedure to begin your degree program.

The ten least satisfied (listed from the least satisfied) items were:

1. Need for getting a work permit for off-campus jobs.
2. Need for finding a part-time job at the university related to your degree program.
3. Need for exchange of visiting professors between universities of your country and those in the U.S.
4. Need for economic contributions of foreign governments to U.S. universities in order to finance special programs for foreign students.
5. Need for having magazines and newspapers from your country available in the university library.
6. Need for work experience in your field before returning home.
7. Need for having publications in your area of study from your country available in the university library.
8. Need for finding a job for your husband or wife.
9. Need for seminars with students from several departments to deal with problems of national development.
10. Need for having U.S. nationals correctly informed about your country.

Table 6. Needs for Information

Need Items	% Distribution[a] of Importance Scores[b]										% Distribution[a] of Satisfaction Scores[c]									
	1	2	3	4	5	6	7	Total	Mean	SE	1	2	3	4	5	6	7	Total	Mean	SE
Information about																				
The registration procedure.	4.3	2.6	4.2	5.5	16.1	26.2	41.1	100.0	5.70	.07	1.5	3.4	7.5	6.8	16.0	29.0	35.8	100.0	5.63	.10
The procedure to begin your degree program.	2.9	1.9	1.7	1.7	11.1	26.5	54.2	100.0	6.12	.04	1.9	3.2	8.3	6.8	19.1	31.9	28.8	100.0	5.49	.07
Examination requirements and regulations for a degree.	2.9	3.5	2.6	2.8	14.9	27.8	45.4	100.0	5.88	.04	2.2	3.7	5.9	7.4	18.8	35.6	26.4	100.0	5.49	.05
English language requirements.	7.3	5.0	3.7	9.0	19.0	22.9	35.2	100.0	5.29	.07	3.9	3.6	5.2	11.0	22.0	26.9	27.5	100.0	5.34	.09
English courses for foreign students.	11.3	6.1	5.9	10.7	20.2	20.2	25.6	100.0	4.85	.08	7.8	6.6	7.9	20.6	15.7	20.9	20.5	100.0	4.74	.11
The efficient use of the library.	2.8	2.9	3.0	9.0	19.2	28.4	34.6	100.0	5.63	.05	2.7	2.2	5.3	7.7	20.4	30.4	31.4	100.0	5.58	.08
The role of the academic advisor.	3.4	2.4	3.6	7.0	16.2	29.2	38.3	100.0	5.71	.05	5.7	6.5	7.5	11.8	19.0	26.8	22.7	100.0	5.03	.09
The role of the major professor.	3.3	3.1	3.4	8.0	18.5	26.9	36.9	100.0	5.63	.05	3.6	4.3	7.7	12.9	23.2	25.9	22.4	100.0	5.15	.07
The role of the foreign student advisor.	3.3	4.1	3.6	9.6	20.7	25.2	33.4	100.0	5.50	.05	8.4	5.3	7.8	14.1	17.5	23.3	23.6	100.0	4.92	.12
The cost of traveling in the U.S.	5.4	4.8	7.3	17.2	23.6	18.8	22.9	100.0	4.97	.06	6.4	4.0	8.4	22.3	19.6	21.6	17.7	100.0	4.81	.06
How much it costs to live here.	2.8	0.7	0.6	5.9	8.4	15.7	65.8	100.0	6.27	.03	8.8	3.1	5.9	16.4	14.0	19.9	31.9	100.0	5.11	.12
Housing facilities.	2.9	0.8	1.0	6.6	11.5	19.2	58.0	100.0	6.12	.06	7.4	3.1	5.8	15.7	15.9	23.3	29.7	100.0	5.15	.06
Housing cost.	2.5	0.9	0.8	4.1	8.8	20.4	62.5	100.0	6.27	.03	11.6	5.5	7.7	14.8	15.2	19.4	25.7	100.0	4.78	.10
Community services available to foreign students and their families.	4.4	2.1	2.3	19.8	16.0	22.1	33.3	100.0	5.40	.05	12.8	6.0	10.0	32.9	14.9	11.8	11.6	100.0	4.13	.08
Recreational activities available on campus.	3.4	2.2	3.3	21.6	25.7	22.9	20.8	100.0	5.16	.04	6.0	2.4	5.5	30.0	16.4	20.8	18.9	100.0	4.86	.12
Recreational activities available off campus.	6.8	4.3	4.0	30.4	23.1	17.1	14.2	100.0	4.67	.06	5.2	5.2	7.7	36.9	17.5	15.4	12.1	100.0	4.51	.04
Availability of food and spices you are accustomed to using.	9.3	2.4	5.0	22.7	18.4	18.1	24.2	100.0	4.89	.06	7.2	4.0	7.2	23.8	15.0	21.3	21.6	100.0	4.86	.06
Health services available.	2.5	0.8	1.5	4.3	8.3	22.8	59.8	100.0	6.23	.03	9.5	3.9	5.8	12.3	17.8	22.5	28.1	100.0	5.05	.12
Health insurance available.	3.4	1.4	1.5	10.5	10.7	21.0	51.6	100.0	5.93	.04	10.8	5.0	5.0	16.2	15.0	20.8	27.1	100.0	4.90	.13
Clothes needed.	4.7	3.5	3.7	18.8	20.6	20.2	28.6	100.0	5.22	.11	2.7	1.1	3.8	10.8	13.9	24.1	34.6	100.0	5.52	.07
Ways of doing things in the U.S.	3.6	2.2	2.1	16.5	17.7	25.5	32.5	100.0	5.49	.06	4.3	1.9	5.7	23.5	18.9	23.6	22.1	100.0	5.10	.07
Dating behavior with U.S. nationals of the opposite sex.	14.6	4.5	4.3	26.0	17.5	12.2	21.0	100.0	4.48	.06	1.8	3.0	6.4	35.5	13.6	13.1	16.6	100.0	4.42	.08
Immigration and visa regulations.	2.7	1.0	0.8	6.1	7.0	19.9	62.4	100.0	6.23	.03	9.6	4.7	7.4	12.7	15.1	21.8	28.7	100.0	4.99	.10
Information on sponsors' rules about families, medical care, and traveling.	7.2	1.7	1.9	19.9	17.5	19.6	32.1	100.0	5.26	.06	6.0	3.6	6.3	31.3	16.4	18.0	16.5	100.0	4.73	.07

a. % distribution, means and SE (standard error of mean) are population estimates computed with weights assigned to all the observations according to the statistical rules on sampling. Therefore, actual frequencies are not reported.

b. 1 = Very unimportant,
2 = quite unimportant,
3 = somewhat unimportant,
4 = neither unimportant nor important,
5 = somewhat important,
6 = quite important,
7 = very important.

c. 1 = Very unsatisfied,
2 = quite unsatisfied,
3 = somewhat unsatisfied,
4 = neither unsatisfied nor satisfied,
5 = somewhat satisfied,
6 = quite satisfied,
7 = very satisfied.

Table 7. Needs Related to Degree Programs in the U.S.

Need Items	% Distribution[a.] of Importance Scores[b.]										% Distribution[a.] of Satisfaction Scores[c.]									
	1	2	3	4	5	6	7	Total	Mean	SE	1	2	3	4	5	6	7	Total	Mean	SE
Need for																				
Having an academic advisor assigned to you before your arrival.	10.5	3.0	2.7	21.7	11.7	16.2	34.1	100.0	5.06	.09	10.9	3.7	6.9	26.0	15.1	17.7	19.6	100.0	4.62	.07
Receiving credit for academic work done outside the U.S.	6.0	1.3	1.7	15.4	8.2	15.2	52.1	100.0	5.73	.07	13.9	4.5	6.4	26.4	11.8	15.7	21.2	100.0	4.50	.08
Sharing responsibility in planning your degree program with your academic advisor.	2.5	1.1	1.5	7.7	9.8	25.6	51.9	100.0	6.05	.04	8.2	4.6	8.4	15.4	14.9	23.2	25.3	100.0	4.95	.07
Substituting certain requirements with alternative courses more relevant to your country.	4.2	1.7	1.5	15.9	10.7	19.9	46.0	100.0	5.71	.05	14.4	6.6	10.2	28.2	13.5	13.9	13.2	100.0	4.14	.07
Having your academic advisor available when needed.	1.7	1.6	0.5	8.0	11.2	26.7	50.2	100.0	6.06	.03	7.7	3.8	8.1	14.7	15.8	22.9	27.0	100.0	5.04	.10
Having faculty members spend enough time with you.	2.9	1.0	1.7	13.3	17.6	25.3	38.1	100.0	5.70	.04	9.3	4.9	7.8	22.9	19.1	20.4	15.7	100.0	4.62	.12
Having faculty members with interantional experiences to guide you.	4.1	2.1	2.6	16.2	14.7	22.5	37.7	100.0	5.54	.06	16.1	7.5	9.9	30.2	14.0	12.1	10.2	100.0	3.96	.11
Having an experience as a teaching assistant.	5.8	2.1	3.0	19.5	17.3	18.4	34.0	100.0	5.31	.05	13.3	7.1	7.7	32.5	11.7	11.3	16.4	100.0	4.22	.15
Having an experience as a research assistant.	4.6	1.3	2.2	14.6	13.7	23.6	40.1	100.0	5.63	.06	15.5	6.6	6.1	28.7	12.0	13.0	18.0	100.0	4.26	.14
Opportunities to do some team-work with American students.	4.1	2.5	2.0	14.4	15.7	24.7	36.6	100.0	5.55	.06	15.1	6.7	8.0	25.9	14.6	16.0	13.6	100.0	4.21	.11
Having another student to help you with your study.	13.7	4.5	5.0	26.4	15.8	15.9	18.7	100.0	4.49	.07	12.0	6.4	5.3	39.7	14.2	10.7	11.7	100.0	4.17	.10
Having the sponsoring agency accept necessary adjustments in your degree program.	8.6	1.6	1.4	26.0	10.6	17.6	34.2	100.0	5.18	.06	10.7	3.8	5.5	43.0	13.6	11.3	12.2	100.0	4.28	.07
Coordinating between the sponsoring agency and the university.	8.1	2.4	1.4	22.8	11.0	19.7	34.5	100.0	5.23	.06	13.2	4.0	7.8	40.2	12.1	10.4	12.3	100.0	4.14	.06
Economic contributions of foreign governments to the U.S. universities in order to finance special programs for foreign students.	11.8	2.1	2.0	21.5	10.0	16.5	36.1	100.0	5.10	.12	27.0	6.9	10.1	37.3	8.0	4.1	6.6	100.0	3.31	.09

a. - c.: See Table 6 footnotes.

Table 8. Needs Related to Relevance of the U.S. Degree Program and Needs for Extracurricular Professional Activities in the U.S.

Need Items	% Distribution[a] of Importance Scores[b] 1	2	3	4	5	6	7	Total	Mean	SE	% Distribution[a] of Satisfaction Scores[c] 1	2	3	4	5	6	7	Total	Mean	SE
Relevancy of the U.S. Degree Program Need for																				
A program relevant to your future job in your country.	3.6	1.1	0.5	6.9	8.6	21.2	58.1	100.0	6.12	.05	8.6	4.1	6.0	19.9	19.8	21.2	20.4	100.0	4.83	.09
A program relevant to the present needs of your country.	3.7	1.3	0.5	9.4	8.1	23.1	53.9	100.0	6.02	.05	9.4	4.8	6.0	22.8	19.5	18.8	18.7	100.0	4.69	.12
Level of technology applicable to the future of your country.	2.8	1.2	0.9	8.2	10.4	24.2	52.4	100.0	6.04	.04	7.9	3.5	6.0	21.7	23.1	20.3	17.5	100.0	4.79	.08
Obtaining basic knowledge in your area of study.	2.8	0.4	0.4	3.6	5.7	21.4	65.8	100.0	6.36	.03	2.9	2.2	3.7	11.4	19.8	27.6	32.3	100.0	5.55	.11
Having international materials included in courses.	5.2	1.5	1.7	16.7	12.4	21.6	41.0	100.0	5.58	.08	11.7	7.3	10.0	32.0	16.9	12.5	9.6	100.0	4.11	.06
Training to apply knowledge.	1.9	0.5	.0.4	4.5	5.5	10.0	68.2	100.0	6.41	.04	15.5	7.7	9.6	18.9	18.1	16.3	13.8	100.0	4.20	.11
Training for leadership role.	6.4	1.5	1.4	21.5	13.4	21.4	34.4	100.0	5.36	.06	9.3	5.2	8.0	31.1	18.1	13.6	7.8	100.0	4.22	.08
Training to introduce changes in your country.	7.1	2.8	2.8	18.8	10.2	22.2	36.1	100.0	5.33	.06	11.1	7.1	9.3	36.9	16.4	11.5	7.8	100.0	4.06	.07
Thesis research in your country.	5.7	2.5	2.7	21.6	13.4	19.6	34.3	100.0	5.31	.06	11.7	7.0	8.8	39.2	13.5	10.1	9.6	100.0	4.05	.06
Seminars with students from several departments to deal with problems of national development.	4.9	2.6	2.3	21.9	17.0	21.6	29.7	100.0	5.27	.05	20.2	8.4	11.3	39.3	10.2	5.9	4.6	100.0	3.47	.06
Exchange of visiting professors between universities of your country and those in the U.S.	4.5	1.6	1.7	17.8	16.3	20.9	37.3	100.0	5.52	.06	26.1	9.1	11.6	33.9	9.0	5.9	4.5	100.0	3.26	.05
Extracurricular Professional Activities in the U.S. Need for																				
Opportunities to give information about your country in educational situations.	4.1	2.3	2.3	10.0	23.7	23.4	24.4	100.0	5.24	.06	15.4	10.2	12.7	35.3	13.7	7.6	5.1	100.0	3.65	.06
Opportunities to attend off-campus professional meetings.	2.6	1.8	2.3	17.7	18.1	28.1	29.4	100.0	5.49	.06	17.7	8.7	12.7	30.8	14.9	8.8	6.4	100.0	3.69	.08
Learning how universities provide assistance to local communities.	4.9	3.5	4.7	27.4	18.5	18.9	22.1	100.0	4.96	.06	11.4	7.8	11.4	43.4	14.4	7.3	4.2	100.0	3.80	.07
Opportunities to put into practice what you learn in class.	1.9	0.7	0.8	4.7	7.6	24.4	59.9	100.0	6.28	.04	20.2	9.7	13.6	19.4	17.2	11.9	7.8	100.0	3.71	.12
Work experience in your field before returning home.	1.8	0.6	0.9	4.4	5.1	15.6	71.6	100.0	6.43	.04	28.7	9.6	10.1	23.2	10.7	8.5	9.2	100.0	3.40	.13

a. - c.: See Table 6 footnotes.

Table 9. Needs Related to University Student Status in the U.S.

Need Items	% Distribution[a.] of Importance Scores[b.]										% Distribution[a.] of Satisfaction Scores[c.]									
	1	2	3	4	5	6	7	Total	Mean	SE	1	2	3	4	5	6	7	Total	Mean	SE
Need for																				
Understanding the grading system.	3.0	1.7	0.8	10.1	12.3	20.8	51.4	100.0	5.95	.06	3.5	1.6	3.9	12.3	16.7	24.9	37.0	100.0	5.60	.06
Understanding course requirements of instructors.	1.8	1.0	0.4	4.8	10.6	23.4	58.0	100.0	6.24	.05	2.9	2.2	5.3	12.1	18.0	27.1	32.4	100.0	5.51	.08
Being able to take class notes well.	1.7	0.5	1.3	4.1	6.8	18.8	66.8	100.0	6.37	.04	4.2	3.7	8.6	14.6	19.5	24.3	25.2	100.0	5.15	.09
Having extra time in taking exams to compensate for language difficulty.	9.4	2.0	3.1	17.1	10.5	18.0	39.9	100.0	5.31	.07	18.9	7.1	8.2	28.7	12.3	13.6	11.2	100.0	3.94	.10
Having opportunities to discuss course work with U.S. students.	4.6	2.0	1.9	18.4	18.9	22.9	31.3	100.0	5.39	.05	12.2	8.3	9.2	29.7	16.1	12.5	12.1	100.0	4.15	.11
Opportunities to discuss course work with faculty members.	1.3	0.8	0.7	7.7	13.2	32.3	43.9	100.0	6.03	.04	7.3	6.2	8.8	22.2	20.6	19.3	15.6	100.0	4.63	.10
Getting adequate advice from your academic advisor.	1.6	0.8	0.8	5.8	10.5	26.3	54.2	100.0	6.19	.05	12.1	5.1	8.4	17.9	16.8	19.9	19.9	100.0	4.61	.09
Getting adequate advice from your foreign student advisor.	2.9	1.3	1.2	14.9	17.3	21.2	41.3	100.0	5.71	.07	13.4	6.6	8.0	25.3	13.7	16.4	16.6	100.0	4.35	.14
Being treated as fairly as U.S. students by faculty members.	1.5	0.6	0.5	5.5	6.2	17.6	68.0	100.0	6.39	.04	10.1	6.0	9.7	16.8	14.2	19.7	23.6	100.0	4.72	.13
Being respected as a fellow human being by U.S. students.	1.7	0.6	0.5	6.5	6.1	15.6	69.0	100.0	6.38	.04	9.7	4.8	9.7	15.7	15.1	21.5	23.6	100.0	4.80	.10
Having publications in your area of study from your country available in the university library.	3.1	1.8	1.5	16.0	15.3	18.3	44.0	100.0	5.70	.08	26.2	7.2	12.8	28.7	10.9	7.2	7.0	100.0	3.41	.08
Having magazines and newspapers from your country available in the university library.	2.5	1.2	1.2	10.6	13.1	22.2	49.2	100.0	5.94	.09	31.0	9.8	8.4	20.2	12.3	8.4	9.7	100.0	3.37	.15
Having an office space for each graduate student.	4.2	1.4	3.0	18.6	11.0	20.2	41.6	100.0	5.58	.10	15.9	4.1	8.2	24.4	12.4	14.6	20.5	100.0	4.39	.15

a. - c.: See Table 6 footnotes.

Table 10. Needs Related to Money and Jobs in the U.S.

Need Items	% Distribution[a.] of Importance Scores[b.]										% Distribution[a.] of Satisfaction Scores[c.]									
	1	2	3	4	5	6	7	Total	Mean	SE	1	2	3	4	5	6	7	Total	Mean	SE
Need for																				
Having enough money for school.	1.5	0.3	0.2	3.1	3.8	13.0	78.0	100.0	6.58	.02	8.2	4.2	6.5	16.2	19.1	21.2	24.6	100.0	4.96	.07
Having enough money for basic living expenses.	1.2	0.4	0.1	2.2	3.9	12.6	79.7	100.0	6.64	.03	6.7	4.6	7.7	15.1	19.9	22.3	23.7	100.0	4.99	.08
Having enough money to receive necessary medical care.	1.1	0.4	0.8	3.9	5.9	13.2	74.8	100.0	6.52	.02	11.0	5.4	8.5	18.0	17.9	17.7	21.5	100.0	4.65	.09
Having money for some recreational activities.	2.0	1.5	2.4	14.8	22.0	24.6	32.6	100.0	5.58	.05	7.7	5.7	9.8	27.7	19.5	15.9	13.7	100.0	4.48	.08
Receiving money from your sponsor without delay.	3.2	0.9	0.2	9.7	7.3	15.6	63.1	100.0	6.16	.04	10.7	4.1	7.2	20.6	13.2	17.6	26.6	100.0	4.81	.09
Getting help in banking.	5.6	2.3	2.1	22.9	14.3	19.9	32.9	100.0	5.29	.05	11.3	4.0	6.4	28.9	15.7	16.2	17.5	100.0	4.52	.07
Getting help from Student Financial Aids.	5.3	2.0	1.7	14.7	11.1	20.3	44.7	100.0	5.65	.07	25.2	5.7	9.4	27.1	10.0	11.4	11.3	100.0	3.70	.15
Finding a part-time job.	5.0	2.0	1.6	15.6	14.1	19.1	42.5	100.0	5.60	.09	23.1	8.3	8.6	30.1	11.6	9.4	9.0	100.0	3.63	.07
Finding a part-time job at the university related to your degree program.	2.7	1.0	0.5	8.0	8.7	21.3	57.8	100.0	6.14	.05	36.1	9.8	0.1	18.3	7.4	8.8	10.5	100.0	3.19	.12
Finding a job for your husband or wife.	8.6	1.1	2.1	23.7	10.7	16.8	37.0	100.0	5.25	.08	25.2	7.5	6.8	39.2	8.6	5.9	6.8	100.0	3.44	.07
Getting a work permit for off campus jobs.	5.1	1.0	1.6	13.4	11.5	19.3	48.2	100.0	5.76	.07	36.0	8.8	8.0	25.7	7.3	6.1	8.1	100.0	3.10	.09

a. - c.: See Table 6 footnotes.

Table 11. Needs Related to Local Community Life and Housing Needs in the U.S.

Need Items	% Distribution[a] of Importance Scores[b]										% Distribution[a] of Satisfaction Scores[c]									
	1	2	3	4	5	6	7	Total	Mean	SE	1	2	3	4	5	6	7	Total	Mean	SE
Local Community Life in the U.S. Need for																				
Getting accustomed to U.S. food.	10.9	2.3	3.5	35.1	17.5	14.8	16.0	100.0	4.54	.07	4.8	1.6	4.6	32.7	15.3	17.8	23.2	100.0	4.99	.05
Observing your religious practices.	16.5	2.6	3.4	26.8	12.8	12.3	25.6	100.0	4.56	.07	5.0	3.0	2.6	35.4	11.7	13.0	29.2	100.0	5.02	.08
Being able to behave according to your values and beliefs	2.6	1.2	1.3	13.8	13.7	23.1	44.3	100.0	5.81	.05	4.9	2.6	5.5	23.2	14.8	20.6	28.3	100.0	5.15	.08
Having sufficient time for social and recreational activities.	2.3	1.5	1.8	17.7	22.9	25.4	28.5	100.0	5.47	.05	7.1	5.4	12.3	27.2	20.0	15.8	12.3	100.0	4.44	.07
Feeling welcome by U.S. nationals in the local community.	1.4	1.2	1.3	11.8	13.6	27.6	43.1	100.0	5.90	.05	9.4	7.3	8.4	25.6	18.4	15.9	15.0	100.0	4.44	.10
Having recreational activities with U.S. nationals.	3.4	1.3	1.7	20.8	23.4	24.0	25.5	100.0	5.33	.04	9.3	6.8	10.3	30.7	16.9	14.0	11.9	100.0	4.28	.10
Visiting U.S. families.	3.9	1.9	2.5	22.5	21.8	22.4	25.0	100.0	5.24	.04	10.5	7.0	9.5	29.9	16.2	12.6	14.3	100.0	4.29	.10
Having U.S. nationals correctly informed about your country.	2.1	1.0	1.5	10.2	13.4	23.3	48.3	100.0	5.96	.04	23.7	11.0	13.7	21.1	13.8	10.1	6.7	100.0	3.47	.09
Having local people treat foreign students courteously.	2.0	1.1	0.9	11.9	13.8	27.1	43.1	100.0	5.88	.07	11.0	5.1	9.5	27.4	18.0	16.2	12.8	100.0	4.36	.11
Social activities which will give you an opportunity to meet persons of the opposite sex.	6.6	2.1	2.8	21.7	18.2	19.6	29.0	100.0	5.18	.05	9.6	5.8	8.4	35.8	17.0	11.2	12.2	100.0	4.27	.09
Obtaining medical care.	1.5	0.6	0.5	5.3	9.6	21.7	60.9	100.0	6.29	.02	7.3	6.3	7.7	18.7	18.3	21.3	20.4	100.0	4.80	.10
Obtaining medical insurance.	1.0	0.7	1.1	7.3	9.5	22.6	57.7	100.0	6.22	.04	8.2	4.7	6.6	19.1	16.5	19.6	25.4	100.0	4.91	.14
Knowing income tax regulations.	7.8	2.3	2.4	22.3	15.3	20.2	29.8	100.0	5.15	.07	11.0	6.0	9.0	35.6	14.8	11.6	11.9	100.0	4.20	.05
Housing Needs in the U.S. Need for																				
Having adequate housing facilities on campus.	3.1	2.1	1.0	8.8	7.8	21.2	56.9	100.0	6.08	.04	15.9	5.6	9.8	20.7	15.5	15.6	16.9	100.0	4.29	.17
Having adequate housing facilities off campus.	3.5	0.7	0.6	12.9	12.2	23.9	46.3	100.0	5.86	.06	8.3	4.6	9.1	24.8	18.3	18.6	16.3	100.0	4.61	.09
Obtaining necessary furniture at a reasonable cost.	2.9	1.2	2.8	13.1	13.3	24.9	41.9	100.0	5.75	.06	8.2	6.2	12.0	27.7	18.3	15.3	12.2	100.0	4.37	.05
Borrowing necessary furniture.	11.2	3.1	3.5	32.3	13.2	15.4	21.3	100.0	4.65	.05	12.5	5.7	8.3	48.1	10.4	7.6	7.5	100.0	3.91	.08
Getting housing you want without discrimination.	2.5	1.0	0.6	8.6	9.7	23.0	54.5	100.0	6.09	.04	12.3	5.8	7.3	20.5	13.0	18.7	22.5	100.0	4.62	.09
Sharing housing with U.S. nationals.	9.1	2.6	4.0	32.0	15.9	16.4	20.0	100.0	4.72	.05	8.0	4.2	5.3	47.7	10.3	11.5	12.9	100.0	4.34	.10
Being informed about legal rights and duties when you sign a contract.	1.8	1.2	1.1	6.9	8.9	22.1	57.9	100.0	6.18	.03	11.4	6.5	11.5	20.9	17.2	17.1	15.4	100.0	4.39	.10

a. - c.: See Table 6 footnotes.

Table 12. Needs Related to Family Living and Interpersonal Relationships in the U.S.

Need Items	% Distribution[a.] of Importance Scores[b.]										% Distribution[a.] of Satisfaction Scores[c.]								
	1	2	3	4	5	6	7	Total	Mean	SE	1	2	3	4	5	6	7	Total	Mean	SE
Family Living in the U.S. Need for																				
Finding enough activities for your spouse (husband or wife).	5.2	0.6	1.3	13.3	8.8	26.6	44.3	100.0	5.77	.09	9.0	9.3	9.3	25.6	15.0	17.3	14.5	100.0	4.38	.12
English language training for your spouse at a reasonable cost.	10.6	0.9	1.9	15.4	8.3	19.4	43.5	100.0	5.42	.14	16.1	6.5	9.8	26.1	10.3	11.4	19.8	100.0	4.21	.17
Appropriate educational opportunities for your spouse.	2.9	1.0	1.4	12.0	10.9	23.3	48.4	100.0	5.90	.08	9.0	6.5	8.7	22.4	17.1	12.8	23.6	100.0	4.65	.08
Social activities which include children.	4.5	0.8	0.9	13.7	10.9	24.9	44.3	100.0	5.78	.07	8.1	7.5	8.3	30.2	14.4	18.1	13.4	100.0	4.43	.07
Finding appropriate child care.	5.6	0.6	2.3	12.6	7.7	19.6	51.6	100.0	5.81	.09	7.8	7.9	9.6	32.1	12.7	14.1	15.8	100.0	4.40	.09
Finding appropriate educational opportunities for children.	4.7	0.4	0.3	11.7	4.0	16.2	62.7	100.0	6.09	.07	4.9	3.2	3.2	30.6	13.3	21.9	22.8	100.0	5.01	.09
Getting to know U.S. neighbors.	3.3	0.7	2.2	18.1	17.7	25.4	32.7	100.0	5.53	.07	11.7	8.2	11.0	27.2	14.9	14.2	12.8	100.0	4.19	.11
Interpersonal Relationships in the U.S. Need for																				
A good relationship with your advisor.	1.3	1.1	0.2	5.2	9.9	21.6	60.6	100.0	6.29	.04	5.3	3.9	7.1	17.7	14.7	20.8	30.4	100.0	5.16	.10
Good relationships with the degree program committee members.	1.8	1.2	0.7	9.5	10.2	24.6	52.0	100.0	6.07	.05	6.1	3.3	6.1	28.4	16.8	20.6	18.7	100.0	4.83	.13
Good relationships with course instructors.	1.1	0.5	0.7	5.8	10.7	28.6	52.6	100.0	6.20	.04	4.1	2.3	5.3	19.3	21.9	25.8	21.2	100.0	5.15	.09
A good relationship with your foreign student advisor.	2.4	1.1	1.2	12.5	13.2	25.1	44.5	100.0	5.86	.06	8.4	6.0	5.8	23.4	13.1	18.8	24.5	100.0	4.81	.13
Friendly treatment by other university staff members	1.4	1.0	1.3	11.0	13.2	30.7	41.3	100.0	5.91	.04	4.8	3.0	5.4	27.1	18.7	23.5	17.4	100.0	4.92	.12
U.S. friends.	2.0	1.4	1.1	11.0	18.1	28.1	38.4	100.0	5.80	.03	6.4	6.6	8.0	23.2	18.3	19.5	18.1	100.0	4.71	.11
U.S. friends with whom you can discuss personal problems.	4.5	2.1	1.5	20.4	17.6	25.1	28.8	100.0	5.35	.04	11.9	6.2	8.1	31.5	14.7	13.6	14.0	100.0	4.28	.11
Social activities with U.S. nationals.	2.3	1.7	1.4	19.5	19.6	28.2	27.3	100.0	5.46	.04	9.5	6.0	9.5	30.5	15.3	16.5	12.7	100.0	4.36	.07
Friends from other countries.	2.0	1.7	1.0	18.6	23.1	26.7	26.9	100.0	5.47	.05	2.8	2.5	4.3	26.0	20.6	23.6	20.2	100.0	5.11	.04

a. - c.: See Table 6 footnotes.

Table 13. Needs for Pre-return Information and Needs Related to Anticipated Conditions After Returning Home.

Need Items	% Distribution[a] of Importance Scores[b] 1	2	3	4	5	6	7	Total	Mean	SE	% Distribution[a] of Satisfaction Scores[c] 1	2	3	4	5	6	7	Total	Mean	SE
Pre-return Information Need for																				
Knowing how to send books and household items home.	3.5	1.1	0.9	10.6	10.5	22.1	51.2	100.0	5.95	.06	13.3	7.5	9.4	27.5	15.4	13.3	13.5	100.0	4.18	.06
Knowing information, in advance, on tax clearance regulations, sailing permit, etc.	2.8	1.3	0.7	11.9	10.2	22.7	50.4	100.0	5.95	.07	15.9	10.5	12.0	30.4	13.2	9.1	8.9	100.0	3.77	.05
Knowing the cheapest means of transportation to return home.	3.2	0.6	0.4	9.4	8.1	20.2	58.2	100.0	6.12	.04	16.0	7.8	10.8	26.5	11.7	13.3	13.9	100.0	4.06	.07
Anticipated Conditions after Returning Home Need for																				
Finding a job appropriate to your training.	2.6	0.6	0.1	3.6	3.3	16.0	73.9	100.0	6.48	.03	9.5	4.4	10.4	21.2	15.7	18.3	20.5	100.0	4.66	.13
Adequate salary or wages.	1.7	0.8	0.3	4.7	9.0	22.8	60.8	100.0	6.30	.04	9.3	7.6	10.3	26.5	18.5	15.6	12.1	100.0	4.32	.08
Finding appropriate housing.	2.8	0.9	0.9	8.0	9.9	22.0	55.6	100.0	6.10	.04	9.1	4.0	7.7	26.6	18.9	15.6	18.1	100.0	4.61	.10
Having funds for research.	2.2	1.3	1.1	10.5	10.6	23.3	50.8	100.0	6.00	.07	17.9	8.4	14.9	32.0	13.7	7.1	5.9	100.0	3.60	.08
Having facilities to use U.S. training in future jobs.	1.9	1.5	1.1	6.9	10.3	28.5	49.8	100.0	6.07	.05	12.1	8.6	11.1	29.6	17.5	13.7	7.5	100.0	4.03	.10
Having resources to use U.S. training in future jobs.	1.4	1.5	0.8	7.8	9.6	28.5	50.3	100.0	6.09	.04	11.7	9.1	12.3	31.2	14.3	13.2	8.2	100.0	4.00	.11
Receiving the latest professional materials in the field.	1.0	0.4	0.5	3.8	7.4	23.0	63.8	100.0	6.40	.04	10.5	7.4	12.7	25.2	18.4	14.2	11.5	100.0	4.22	.08
Visiting outside you country at intervals to keep in contact with scholars in your field.	2.0	0.3	0.4	6.7	8.6	26.0	56.0	100.0	6.22	.04	12.0	9.1	11.8	30.3	16.6	10.1	10.2	100.0	4.02	.06
Having scholars visit your country for professional consultations.	1.7	0.6	0.5	7.0	14.1	28.7	47.5	100.0	6.07	.03	10.2	9.1	12.7	30.1	18.4	11.6	7.9	100.0	4.04	.07
Publishing in professional journals abroad.	1.3	0.9	1.4	11.8	13.3	25.2	46.1	100.0	5.95	.07	9.6	7.6	10.4	34.0	16.5	13.5	8.4	100.0	4.14	.04
Publishing in professional journals in your country.	1.6	1.0	1.0	9.2	11.3	25.9	50.0	100.0	6.06	.05	7.4	4.6	6.8	31.2	16.6	18.3	15.1	100.0	4.61	.06

a. - c.: See Table 6 footnotes.

Table 14. Importance of Various Goals and Likelihood of Achieving Them.

Need Items (goals)	Importance of Goals[b] (% Distribution[a])										Likelihood of Achieving Goals[c] (% Distribution[a])									
	1	2	3	4	5	6	7	Total	Mean	SE	1	2	3	4	5	6	7	Total	Mean	SE
Obtaining the degree.	1.8	0.2	0.1	1.9	3.9	12.7	79.4	100.0	6.62	.04	1.2	0.3	1.1	7.9	8.2	18.3	63.1	100.0	6.29	.06
A broad education.	1.4	0.7	0.8	3.5	7.8	22.4	63.3	100.0	6.36	.04	1.8	0.7	3.6	11.0	17.7	29.0	36.2	100.0	5.74	.07
Specialized skills and knowledge in your field.	1.5	0.4	0.4	1.5	3.1	17.4	75.6	100.0	6.59	.02	2.3	1.6	4.4	8.4	18.0	30.7	34.5	100.0	5.68	.09
Developing research skills.	1.9	0.6	1.5	7.5	10.4	20.4	57.8	100.0	6.16	.04	3.2	3.0	4.1	18.1	21.2	24.4	26.0	100.0	5.28	.11
Improving your command of English.	6.3	1.1	0.9	9.7	9.3	18.7	54.0	100.0	5.87	.07	3.5	2.3	3.8	13.5	18.2	28.0	30.7	100.0	5.48	.07
Gaining practical experience in your field.	1.1	0.3	0.6	2.9	6.2	21.5	67.4	100.0	6.47	.03	10.9	5.1	8.8	15.8	18.8	21.6	19.1	100.0	4.67	.14
Getting to know U.S. professionals in your field.	1.9	1.1	1.2	8.4	12.0	28.3	47.2	100.0	6.01	.04	8.0	5.4	8.2	23.8	20.7	18.8	14.9	100.0	4.60	.13
Seeing different parts of the U.S.	1.7	1.9	1.4	12.4	19.4	24.0	39.0	100.0	5.74	.05	8.0	4.9	6.8	19.4	21.9	19.1	19.8	100.0	4.79	.12
Learning about the U.S.	3.1	2.1	2.1	11.7	18.9	24.7	37.3	100.0	5.65	.06	2.6	2.9	3.5	18.6	19.6	28.6	24.3	100.0	5.33	.04
Broadening your view of the world.	1.3	1.1	0.9	6.0	11.5	24.8	54.4	100.0	6.17	.04	2.4	1.3	3.1	14.3	18.5	25.2	35.2	100.0	5.62	.05

a. and b.: See Table 6 footnotes.

c. 1 = very unlikely,
2 = quite unlikely,
3 = somewhat unlikely,
4 = neither likely nor unlikely,
5 = somewhat likely,
6 = quite likely,
7 = very likely.

Table 15 presents the data (percent distribution, means and standard errors) with regard to English language skills. The importance of various English language skills as self-evaluated, and the evaluation of English courses among those who had taken English courses are included. These items were developed into three composites: the importance composite (measure of linguistic needs), the evaluation composite (subjective measure of proficiency), and the course evaluation composite for English remedial courses. They will be discussed in the section on hypothesis testing.

Students placed high importance on all the skills we delineated. The highest mean score was shared among understanding spoken English, reading textbooks and journals, and writing papers and a thesis. Respondents rated the skill to converse with faculty members and other students to be least important, even though still rated highly. They tended to consider interactional linguistic skills to be less important.

They evaluated their own skill of reading to be the highest and the skill of participating in class discussion to be the lowest. Among those who took English courses, they considered that those courses were most helpful to improve reading skill and least helpful to improve the skill of taking class notes. That is, they considered English remedial courses as contributing most to improve the very skill which they needed to improve least according to their self-evaluation.

Table 16 presents other data regarding English courses. About one half of the students had taken English courses for foreign students. Among those who had not taken such courses, the most frequent reason given was "I was not required to take any of them," followed by, "I do not feel I need to improve my English." An estimated 27% of the population never took the TOEFL examination. Among those who had taken it, one fourth reported scores in the range of 501-550, while nearly one third reported scores over 550.

Table 17 presents data on factors students throught prevented them from establishing good relationships with U.S. nations. Over all, they did not perceive any one of the listed factors as serious barriers. "Your being a foreigner" received the highest mean score, but it was considered as only "somewhat" preventing them from establishing good relationships, closely followed by "Their attitude toward you." The least important barrier was one's religious background.

In Table 18, data with regard to the rating of oneself and prestige accorded to one's country are presented. Students were asked to give ratings on three characteristics of themselves and their home country's prestige, as they themselves perceived them, as they thought their friends in home countries would rate them, and as they perceived U.S. students would rate them. For every item, the mean rating score was highest for their perception of rating by friends in the home country, followed by their own rating, and last by their perception of how U.S. students would rate them. Among the four items, (one's academic performance, intelligence, physical

Table 15. Importance and Evaluation of English Language Skills, and Evaluation of English Language Courses.

Need Items	(% Distribution[a.]) 1	2	3	4	5	6	7	Total	Mean	SE	(% Distribution[a.]) 1	2	3	4	5	6	7	Total	Mean	SE
English Language Skills	**Importance of Skills[b.]**										**Self-Evaluation of Skills[c.]**									
Understanding spoken English.	3.5	0.8	0.1	2.9	2.2	9.8	80.6	100.0	6.51	.07	0.7	1.0	2.7	11.2	13.7	30.8	40.0	100.0	5.88	.07
Giving an oral presentation in class.	2.7	0.8	0.5	4.6	8.6	19.3	63.6	100.0	6.28	.05	2.7	2.2	6.5	19.3	20.6	26.4	22.3	100.0	5.21	.09
Reading (textbooks, journals, etc.)	2.4	0.6	0.1	2.5	3.4	14.9	75.9	100.0	6.52	.07	0.8	0.9	1.6	9.9	14.3	31.4	40.6	100.0	5.94	.07
Writing papers and a thesis.	2.0	0.7	0.1	2.2	5.5	14.4	75.1	100.0	6.52	.05	3.5	1.3	5.4	17.6	22.6	25.6	24.0	100.0	5.27	.12
Taking tests.	2.4	0.6	0.7	5.3	8.4	16.7	66.0	100.0	6.31	.04	1.3	1.5	2.1	13.3	19.6	31.2	31.0	100.0	5.66	.06
Taking class notes.	2.5	0.6	0.3	3.2	6.8	18.0	68.6	100.0	6.40	.07	2.1	1.9	5.6	15.1	19.1	25.0	30.2	100.0	5.46	.08
Participating in class discussions.	2.5	0.4	0.4	3.3	8.6	24.1	60.7	100.0	6.30	.05	4.6	3.8	5.9	20.6	18.4	23.0	23.7	100.0	5.08	.09
Conversing with faculty members and other students	2.0	0.8	0.3	4.7	8.6	25.1	58.5	100.0	6.26	.06	1.7	1.0	5.2	16.3	17.7	29.3	28.7	100.0	5.50	.08

Need Items	(% Distribution[a.]) 1	2	3	4	5	6	7	Total	Mean	SE
English Language Skills	**Evaluation[d.] of English Language Courses for Improvement of Skills[e.]**									
Understanding spoken English.	9.5	5.8	6.8	20.5	14.7	14.7	28.0	100.0	5.24	.18
Giving an oral presentation in class.	12.6	5.3	8.5	23.1	13.4	14.1	23.0	100.0	5.02	.16
Reading (textbooks, journals, etc.)	9.1	4.7	5.0	23.4	15.1	17.1	25.6	100.0	5.27	.15
Writing papers and a thesis.	12.1	4.4	6.8	19.6	14.1	21.5	21.5	100.0	5.07	.16
Taking tests.	10.2	4.5	9.9	23.7	15.6	18.6	17.5	100.0	5.05	.14
Taking class notes.	17.5	6.9	8.2	21.4	14.0	14.5	17.5	100.0	4.78	.18
Participating in class discussions.	12.0	9.0	6.8	24.9	15.9	16.0	15.4	100.0	4.85	.14
Conversing with faculty members and other students	9.8	7.1	7.2	23.7	16.1	15.8	20.3	100.0	5.07	.15

a. and b.: See Table 6 footnotes.

c. 1 = very poor,
2 = quite poor,
3 = somewhat poor,
4 = neither poor nor good,
5 = somewhat good,
6 = quite good,
7 = very good.

d. Evaluation was given by those who had taken English language courses. Approximately 35% did not take such courses.

e. 1 = very poorly,
2 = quite poorly,
3 = somewhat poorly,
4 = neither poorly nor well,
5 = somewhat well,
6 = quite well,
7 = very well.

Table 16. English Language Data[a]

Have you taken any English courses for foreign students on campus?	Percent
Yes:	49.3
No:	50.7
Total	100.0

Reasons for not taking any English courses for foreign students among those who did not take any.	Percent[b]
I do not feel I need to improve my English	41.1
I have no time to take them.	12.5
I have no money to take them.	6.1
I do not think they will improve my English.	21.4
I have schedule conflicts.	3.1
I plan to take them later.	2.8
There are no English courses for foreign students on this campus.	4.5
I was not required to take any of them.	69.0

TOEFL score range (% Distribution)	Percent
Never taken	26.7
Below 400	0.3
400-450	4.1
451-500	11.7
501-550	24.7
551-600	18.3
Over 600	14.3
Total	100.0

a. The percentages are population estimates computed with weights assigned to all the observations, according to the statistical rules on sampling. Therefore, actual frequencies are not reported.

b. Percentages do not total to 100.0%, since the respondents were allowed to give more than one reason.

Table 17. Barriers to Establishing Good Relationships With U.S. Nationals

How much is each factor preventing you from having good relationships with U.S. Nationals?	(% Distribution[a]) 1[b]	2	3	4	5	Mean	SE	Total
Your command of English.	38.4	17.6	25.9	11.1	7.0	2.30	.06	100.0
Your religious background.	70.1	12.2	11.2	3.8	2.7	1.57	.05	100.0
Your racial background.	35.3	19.8	24.2	11.6	9.1	2.40	.05	100.0
Your cultural background.	28.5	19.7	25.8	16.3	9.7	2.59	.06	100.0
Your political view.	53.2	14.0	18.6	7.3	6.9	2.01	.09	100.0
Your being a foreigner.	15.4	22.8	28.0	17.6	16.2	2.97	.06	100.0
Your attitude toward others.	46.1	20.7	17.9	9.5	5.8	2.08	.06	100.0
Their attitude toward you.	18.3	20.8	29.5	17.7	13.7	2.88	.05	100.0

a. % distribution, means and SE (standard errors of means) are population estimates computed with weights assigned to all the observations according to the statistical rules on sampling. Therefore, actual frequencies are not reported.

b. 1 = not at all,
2 = a little,
3 = somewhat,
4 = much,
5 = very much.

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Table 18. Self-Rating of Oneself and Country of Origin[a].

Rated Items	(% Distribution[b]) 1	2	3	4	5	Total	Mean	SE	(% Distribution[b]) 1	2	3	4	5	Total	Mean	SE
	How do you rate . . . .?								How do you think your friends in your country would rate . . . .?							
Your academic performance.	0.1	2.1	30.9	46.0	20.8	100.0	3.85	.04	0.5	1.0	23.3	44.5	29.7	100.0	4.01	.03
Your intelligence.	---	0.1	31.6	49.9	18.3	100.0	3.86	.03	---	0.2	21.1	50.3	28.4	100.0	4.07	.03
Your physical appearance.	0.6	3.2	47.1	35.9	13.2	100.0	3.58	.04	0.5	2.7	43.4	36.8	16.5	100.0	3.66	.04
Prestige (status) of your country in the world.	3.7	17.2	39.2	28.1	11.9	100.0	3.27	.06	2.0	12.1	35.4	33.4	17.2	100.0	3.52	.04
	How do you think U.S. students would rate . . . .?															
Your academic performance.	0.3	5.1	33.1	40.6	20.9	100.0	3.77	.04								
Your intelligence.	1.2	3.1	32.2	43.8	19.7	100.0	3.78	.05								
Your physical appearance.	2.3	9.7	47.9	28.7	11.5	100.0	3.37	.05								
Prestige (status) of your country in the world.	16.5	31.8	31.5	14.6	5.5	100.0	2.61	.05								

a. % distribution, means and SE (standard errors of means) are population estimates computed with weights assigned to all the observations according to the statistical rules on sampling. Therefore, actual frequencies are not reported.

b. 1 = Among the lowest
2 = Fairly low
3 = Average
4 = Fairly high
5 = Among the highest

appearance, and prestige of home country), the prestige of home country received the lowest average score in all three "views", while intelligence and academic performance were rated higher than physical appearance and prestige of home country.

Tables 19-21 present personal characteristics of students. In Table 19, which includes basic demographic data, the majority of students were in the age range of 23-32, an estimated three fourths of the population were male, the majority of students were single, and nearly 40 percent of students were married and accompanied by their spouses. As to the primary financial sources, an estimated one third of the population were supported by private sources such as parents or relatives. The second and third large categories were those on university assistantships and those on home government scholarships. The table also includes information as to major areas of study, grade point average and academic levels.

Table 20 presents percent distribution of countries of origin and regions of the world. The largest groups came from Iran, Taiwan, Nigeria, and India. In Table 21, with data on living arrangements, we see nearly one half of this population lived in apartments off campus. Table 22 presents information as to returning home. Two questions related to the

Table 19. Selected Personal Characteristics (% Distribution[a])

Age	Percent	Sex	Percent	Marital Status	Percent	Primary Financial Source	Percent
17-22	17.6	Male	74.3	Single	55.7	A.I.D., LASPAU, or AAI	
23-27	39.2	Female	25.7	Married: The		(AIFGRAD) scholarship.	3.2
28-32	27.9			spouse is		Scholarship from your	
33-37	10.7	Total	100.0	with me	38.4	government.	21.9
38-over	4.6			Married: The		Rockefeller or Ford scholarship.	0.7
				spouse is in		Fulbright scholarship.	0.4
Total	100.0			my country.	4.6	University assistantship.	22.7
				Other	1.3	Parent or relatives (gifts, loans).	34.8
						Savings.	6.9
				Total	100.0	Employment off campus.	6.3
	Mean = 27.4					Employment on campus.	3.1
	Range = 17-55					Total	100.0

Major Areas of Study	Percent	Grade Point Average	Percent	Academic Level	Percent
Engineering	23.7	Between 0.00 and 2.44	4.0	Freshman	1.5
Agriculture	8.0	Between 2.45 and 2.84	13.0	sophomore	6.1
Natural & Life Sciences	9.2	Between 2.85 and 3.24	25.2	Junior	10.5
Business & Management	17.0	Between 3.25 and 4.00	57.8	Senior	17.0
Education	3.7			Master's Student	33.0
Humanities	1.6	Total	100.0	Ph.D. Student	27.5
Health Professions	4.2			Special—Non-degree	
Social Sciences	8.3			Student	4.4
Other	24.3				
				Total	100.0
Total	100.0				

a. Percentages are population estimates computed with weights assigned to all the observations according to statistical rules on sampling. Therefore, frequencies are not reported, since they are not actual but weighted frequencies.

students' return intention were asked. Due to the difference in missing cases, the percentages of no intention to remain in the U.S. differ between the two questions. An estimated one fourth of this population had no intention of staying permanently in the U.S. under any circumstances, while approximately one fourth had jobs waiting in home countries. On the other hand, one third had not made any plans for finding jobs.

Table 20. Region and Country of Origin (% Distribution[a])

Africa	Percent	South and East Asia	Percent
Nigeria	9.7	Taiwan	13.6
Egypt	1.5	India	6.7
Kenya	1.4	Thailand	4.1
Libya	1.0	Korea	3.6
Ghana	0.9	Malaysia	3.2
Sudan	0.8	Indonesia	1.4
South Africa	0.6	Philippines	1.4
Cameroon	0.5	Pakistan	1.3
Algeria	0.4	Bangladesh	0.7
Other	3.2	Singapore	0.4
Region Total	20.0	Other	1.9
		Region Total	38.3
Latin America	**Percent**	**Southwest Asia**	**Percent**
Venezuela	3.6	Iran	18.8
Mexico	2.2	Israel	1.1
Brazil	1.6	Lebanon	1.0
Colombia	1.5	Jordan	0.6
Chile	1.2	Iraq	0.4
Peru	0.9	Other	1.4
Jamaica	0.7	Region Total	23.3
Panama	0.6		
Costa Rica	0.6	Total	100.0
Argentina	0.5		
Other	3.2		
Region Total	16.6		
Europe	**Percent**		
Portugal	0.2		
Turkey	1.6		
Region Total	1.8		

a. The percentages are population estimates computed with weights assigned to all the observations, according to the statistical rules on sampling. Therefore, actual frequencies are not reported.

Results of Hypothesis Testing

In this section, highlights of the results of hypothesis testing are presented. Each one of the thirty-three hypotheses delineated in the chapter on Theoretical Framework was reduced to empirical hypotheses. As far as hypothesis testing was concerned, importance of needs was operationally measured by 24 importance composites, and satisfaction of needs by 24 satisfaction composites. This replaces individual items which were judged to be too numerous to deal with here. Linguistic needs as measured by composites for English language skills will be presented

Table 21. Living Arrangements[a].

Where do you live now?	Percent
In a dormitory.	11.3
In married student housing.	24.5
In a room off campus without cooking privileges.	1.3
In a room off campus with cooking privileges.	9.6
In an apartment off campus.	46.0
In a trailer.	0.8
In a house off campus.	6.5
Total	100.0
Whom do you live with?	
U.S. family	1.9
U.S. student(s).	9.5
Foreign student(s) from another country.	5.3
Student(s) from your country.	16.8
Your spouse (and children).	37.0
Alone.	20.9
Other[b].	8.6
Total	100.0

a. The percentages are population estimates computed with weight assigned to all the observations, according to the statistical rules on sampling. Therefore, actual frequencies are not reported.

b. Mixture of friends and relatives.

Table 22. Returning Home (% Distribution[a].)

Intention to stay permanently in the United States	Percent
Definitely not.	25.7
Very unlikely.	18.3
Somewhat unlikely.	9.8
Undecided.	23.1
Somewhat likely.	10.8
Very likely.	8.5
Definitely will.	3.8
Total	100.0
Reasons which might make one remain in the United States permanently	**Percent[b]. of Respondents Given the Reason**
Political conflict at home.	29.2
Not being able to find a job at home.	11.2
A good job offer in the U.S.	25.2
Marriage to a U.S. citizen.	13.6
Family members' advice.	7.3
Nothing would make me stay permanently in the U.S.	28.5
Looking for job in one's country	**Percent**
Yes, I am.	12.6
No, I am not. But I plan to do so.	28.9
No, I am not. I have not made any plans about finding a job.	34.0
No, I am not, because I have a job waiting for me.	24.5
Total	100.0

a. The percentages are population estimates computed with weight assigned to all the observations according to the statistical rules on sampling. Therefore, actual frequencies are not reported.

b. These figures do not total to 100, since respondents were able to choose more than one reason.

after the results on these need composites are presented. Therefore, in the following tables, English language composites are not included.

Table 23 presents composite codes, their names, and items used to form the composites. Item numbers correspond to the numbers in the questionnaire (Appendix B). Each composite score was the sum of scores of items. Tables are presented only for those hypotheses where independent variables are categorical measures. Otherwise, weighted Pearson's correlation coefficients are given.

Hypothesis 1: Perceived importance of needs is greater than satisfaction of them.

For all need composites, importance scores were found to be significantly higher than satisfaction scores beyond .01 level. Thus, the hypothesis was supported.[25] The data on the difference between importance and satisfaction scores are found in Table 24.

For every need composite students indicated a level of satisfaction lower than that of importance.[26] Therefore, data supports the hypothesis that, to a great extent, needs were not being met at a level approaching their importance.

We regard to this gap between importance and satisfaction of needs to be a potential or actual source of frustration among students, especially where the gap is great and high importance is placed. The following composites were the five least met with the widest gaps between the importance and the satisfaction scores.

1. Need for practical experience.
2. Pre-return information needs.
3. Anticipated post-return needs for professional opportunities and facilities.
4. Financial needs.
5. Anticipated post-return needs for material rewards.

The need for practical experience was the least met of all; this composite ranked the second highest in importance and the lowest in satisfaction. It included two highly correlated items: need for opportunities for students to put into practice what they learn in class and need for work experience in their professional fields before returning home. The composite of needs for pre-return information exhibited the second widest gap. This gap

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[25] When the individual need items were examined, only three items had significantly higher satisfaction scores than importance scores, which implied that students were satisfied with these needs more than to the extent they regarded them important. The items were "need to know about clothes needed," "need for getting accustomed to U.S. food," and "need for observing one's religious practices."

[26] For this hypothesis only, we also examined individual need items and found only three items having higher satisfaction scores than the importance scores. They were "need to know about clothes needed", "need for getting accustomed to U.S. food", and "need for observing one's religious practices."

Table 23. Composites

Composite Code	Composite Name	Item Number[a]
C1	Importance of needs for university information	109,111,113,115,119,121,123
C2	Satisfaction of the above	Satisfaction scores of the above
C3	Importance of needs for community information	129,131,133,137,139,143,145,149
C4	Satisfaction of the above	Satisfaction scores of the above
C5	Importance of needs for foreign student life information	135,141,155
C6	Satisfaction of the above	Satisfaction scores of the above
C7	Importance of needs regarding academic planning	157,159,161
C8	Satisfaction of the above	Satisfaction scores of the above
C9	Importance of needs regarding academic relationships	165,167,169,175
C10	Satisfaction of the above	Satisfaction scores of the above
C11	Importance of needs for relevancy of education	213,215,217,219,221,223,233
C12	Satisfaction of the above	Satisfaction scores of the above
C13	Importance of needs for training to apply knowledge	225,227,231
C14	Satisfaction of the above	Satisfaction scores of the above
C15	Importance of needs for extracurricular learning opportunities	235,237,239
C16	Satisfaction of the above	Satisfaction scores of the above
C17	Importance of needs for practical experience	241,243
C18	Satisfaction of the above	Satisfaction scores of the above
C19	Importance of needs regarding university environment	245,247,255,257,263,267
C20	Satisfaction of the above	Satisfaction scores of the above
C21	Importance of needs for facilitating course work	249,251,253,265
C22	Satisfaction of the above	Satisfaction scores of the above
C23	Importance of financial needs	271,273,275,309,311,313,315,317, 319,321
C24	Satisfaction of the above	Satisfaction scores of the above
C25	Importance of needs regarding living in a U.S. community	323,325,327,329,331,337,339,343, 345,347
C26	Satisfaction of the above	Satisfaction scores of the above
C27	Importance of needs for activities with U.S. nationals	333,335,359,419,421,423
C28	Satisfaction of the above	Satisfaction scores of the above
C29	Importance of housing needs	349,351,353,355,357,361
C30	Satisfaction of the above	Satisfaction scores of the above
C31	Importance of needs of the spouse	363,365,367
C32	Satisfaction of the above	Satisfaction scores of the above
C33	Importance of general family needs	369,371,373,375
C34	Satisfaction of the above	Satisfaction scores of the above
C35	Importance of needs regarding relationships with faculty and staff	409,411,413,415,417
C36	Satisfaction of the above	Satisfaction scores of the above
C39[b]	Importance of pre-return information needs	427,429,431
C40	Satisfaction of the above	Satisfaction scores of the above
C41	Importance of anticipated post-return needs for material rewards	433,435,437
C42	Satisfaction of the above	Satisfaction scores of the above
C43	Importance of anticipated post-return needs for professional opportunities and facilities	439,441,443,445,447,449,451,453
C44	Satisfaction of the above	Satisfaction scores of the above
C45	Importance of primary goals	455,457,459
C46	Likelihood to achieve the above	Likelihood scores of the above
C47	Importance of secondary goals	461,463,465,467,469,471,473
C48	Likelihood to achieve the above	Likelihood scores of the above

a. The numbers refer to item numbers in the questionnaire (Appendix B).

b. There were no C37 and C38

perhaps can be filled more readily by colleges and universities, while the first one poses a variety of difficulties. The third and the fifth widest gaps were found among anticipated post return needs. These gaps indicated students' concern about the needs they would have after returning home and their rather pessimistic anticipation of satisfaction of those needs. The wide gap in financial need was expected; however, it ranked only tenth in importance.

The following five composites had the narrowest gap between importance scores and satisfaction scores (listed in ascending order):

1. Needs for university information.
2. Needs for foreign student life information.
3. Primary goals.
4. Needs for community information.
5. Secondary goals.

Students did not place high importance on needs for university information, yet were highly satisfied with the amount of knowledge they obtained. This pertains to the types of information which are formally available. Needs for information on foreign student life was another of the least important and relatively well satisfied needs. This composite included items pertaining to food and spices, services for foreign students, and sponsor's rules, all of which students appeared to find out fairly easily and consequently did not place much importance on them.

We noted that primary goals, such as obtaining the degree and other academic goals, were among the most important and the students tended to be highly confident about achieving these goals. Secondary goals pertaining to broader experiences were ranked quite low in importance, yet associated with anticipation of moderate likelihood of achieving them. Information regarding community living was moderate in terms of importance and rather high in satisfaction. All in all, with regard to goals and information, gaps between importance and satisfaction were the smallest, indicating less likelihood of frustration.[7] It appears that information was rather readily available, and that students felt quite confident about achieving goals of high importance.

Hypothesis 2: Importance of educational needs does not differ from importance of other needs.

Hypothesis 3: Satisfaction of education needs does not differ from satisfaction of other needs.

Table 24 presents detailed data for these hypotheses.

Among twenty-three composites twelve of them are primarily educational, while eleven are not. Composites were divided into two categories according to their mean scores: the high importance category for the top 12 composites and the low importance category for the remaining 11 composites. For both importance and satisfaction composites, the distribution was the same. Six of the primarily educational composites fell in the

[7] Other needs mentioned by students are presented in Appendix A.

Table 24. Importance and Satisfaction of Needs and Differences Between Scores: Composite Means, Standard Errors and Item Averages[a].

Item[b.] Number	Importance Composites Mean	SE	Item Average	Rank	Item[b.] Number	Satisfaction Composites Mean	SE	Item Average	Rank	Item[b.] Number	Differences[c.] Mean	SE	Item Average	Rank
C1	39.91	.29	5.70	16	C2	37.64	.50	5.38	2	C1-C2	2.33	.58	.33	23
C3	46.26	.26	5.78	11	C4	39.73	.74	4.97	4	C3-C4	6.62	.77	.83	20
C5	15.54	.14	5.18	23	C6	13.77	.15	4.59	8	C5-C6	1.78	.22	.59	22
C7	16.78	.15	5.59	18	C8	14.04	.21	4.68	7	C7-C8	2.88	.26	.96	17
C9	22.86	.12	5.71	14	C10	17.77	.45	4.44	13	C9-C10	5.15	.51	1.24	14
C11	41.99	.27	6.00	9	C12	31.19	.59	4.46	11	C11-C12	10.97	.67	1.57	7
C13	15.92	.11	5.31	19	C14	11.64	.22	3.88	21	C13-C14	4.39	.21	1.46	10
C15	15.60	.11	5.20	22	C16	11.17	.17	3.72	22	C15-C16	4.50	.21	1.50	8
C17	12.72	.08	6.36	2	C18	7.10	.24	3.55	23	C17-C18	5.62	.28	2.81	1
C19	36.68	.24	6.11	5	C20	28.54	.43	4.76	6	C19-C20	8.15	.44	1.36	12
C21	22.82	.15	5.71	14	C22	16.53	.32	4.13	17	C21-C22	6.44	.37	1.61	6
C23	59.26	.46	5.93	10	C24	40.51	.69	4.05	19	C23-C24	18.59	.95	1.86	4
C25	55.83	.34	6.20	4	C26	45.89	.51	5.10	3	C25-C26	10.03	.39	1.11	16
C27	31.85	.23	5.31	19	C28	26.40	.47	4.40	14	C27-C28	5.71	.52	.95	18
C29	34.62	.21	5.77	13	C30	25.86	.42	4.31	16	C29-C30	8.90	.47	1.48	9
C31	17.09	.24	5.70	16	C32	13.03	.34	4.34	15	C31-C32	4.14	.41	1.38	11
C33	23.15	.28	5.78	11	C34	17.90	.28	4.48	10	C33-C34	5.24	.42	1.31	13
C35	30.29	.17	6.06	7	C36	24.75	.51	4.95	5	C35-C36	5.61	.45	1.12	15
C39	18.03	.15	6.01	8	C40	11.97	.17	3.99	20	C39-C40	6.12	.19	2.04	2
C41	18.87	.10	6.29	3	C42	13.65	.26	4.55	9	C41-C42	5.22	.26	1.74	5
C43	48.79	.30	6.10	6	C44	33.04	.49	4.13	17	C43-C44	15.69	.47	1.96	3
C45	19.57	.08	6.52	1	C46	17.74	.20	5.91	1	C45-C46	1.83	.22	.61	21
C47	42.01	.20	5.25	21	C48	35.68	.61	4.46	11	C47-C48	6.44	.64	.92	19

a. All the figures are weighted population estimates.

b. For names and items included in each composite, see Table 23.

c. All the means were found to be significantly different from zero beyond .01 level. Means and SE are those of differences between importance and satisfaction composite scores of individual observations, weighted.

high importance and high satisfaction categories, and likewise, six of primarily non-educational composites fell in the same category. The remaining six educational composites and the remaining five non-educational composites fell in the low importance and low satisfaction categories. The distribution was nearly identical between educational and non-educational composites. Furthermore, non-educational composites in this study are highly associated with educational needs by content due to the very nature of the study. We conclude, as far as the particular types of needs included in this study, that we did not find any significant difference either in terms of importance or in terms of satisfaction between primarily educational and non-educational needs. The educational vs. non-educational dichotomy itself is questionable when applied to students.

Hypothesis 4: Importance of needs varies by sponsorship categories of students.

Hypothesis 5: Satisfaction of needs varies by sponsorship categories of students.

Students were divided into four sponsorship categories by their primary source of support:

1. those sponsored by A.I.D.,
2. those sponsored by home governments,
3. those supported by other scholarships or assistantships, and
4. those supported by themselves and/or other private sources.

For most of the composites, sponsorship categories did not differ significantly. Significant differences were noted, however, in seven importance composites and in six satisfaction composites (See Table 27). Importance composites scores analyzed by sponsorship categories are presented in Table 25, and the data satisfaction composites in Table 26. The results of the empirical hypotheses tested are shown in Table 27.

First, the rank order of the categorical means for each composite is presented from high to low reading from left to right. For the remaining hypotheses, the order will not be presented, since the rank order can be easily noted by inspection of tables. Furthermore, significant rank orders are designated under the column of "significantly different categories" in the tables.

A *special guide to read* the notations under *"significantly different categories"* is given at this point. Detailed findings of empirical hypotheses tested can be read by following this instruction, which will be applicable to all the tables where the heading, "significantly different categories," appears. "None" means that no categories were found to be significantly different from others in terms of composite means. Where category numbers are written, the category (or categories) with a higher mean is placed on the left side and the one with a lower mean on the right side of "vs." A comma between two category numbers means that the adjacent categories did not differ significantly between themselves, but differed from the category on the other side of "vs.". For example, with regard to importance composite C1 in Table 27, category 2 placed significantly higher importance than

category 4 on composite C1. It also shows that category 2, however, was not significantly different from categories 1 and 3, likewise category 4 was not different from categories 1 and 3. Another example: In the same table, as to C5, category 1 was found to place significantly higher importance on this composite than categories 4 and 3. Even though category 4 had a higher mean than category 3, they were not significantly different from each other. Category 2 was found to be not significantly different from any one of the others.

Even though not all composites showed significant differences among the sponsorship groups, we note some tendency which deserves mention. Overall, category 3 (predominantly assistantship supported) placed less importance on composites 3 through 21, which are mostly current academic needs. We also noted, even though not all are statistically significant, that this category tended to rank high for the same composites of needs in terms of satisfaction scores. In other words, this category of students appeared to experience least frustration. They were less concerned with these academic needs, while they tended to be more satisfied with the same needs than students in other categories. We attribute this tendency to the experiences on U.S. campuses for those who receive assistantships as being substantively different from those who are not on assistantships. We realize this claim warrants further investigation.

Another striking tendency to be noted in Table 27 is the clustering of category 1 at the lowest rank for importance composites C23 through C47, (except C39 and C45), even though statistically not significant. These are needs related to mostly non-academic issues and post-return conditions. It appears that this category of students (A.I.D. sponsored) were less concerned with non-academic needs and needs in terms of future. Once again, we repeat these rank orders were statistically not significant and should be taken as trends which need to be further investigated.[28]

Hypothesis 6: Importance of needs varies by age of students.

Hypothesis 7: Satisfaction of needs is positively related to age.

Even though most of the composites were significantly related to age of students from the statistical point of view, in none of the composites did age account for 5% or more of variation. The highest correlation co-efficient was .17 with the satisfaction composite of needs regarding academic planning (C8). The second high was .16 with the importance composite of general family needs (pertaining particularly to concerns with children). Ranking

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[28] When we compared the gap between the importance score and the satisfaction score of the composites of anticipated needs for post-return material rewards, indeed, A.I.D. SPONSORED students indicated the lowest gap, followed by home government-sponsored students. Yet their gap between the level of importance and that of anticipated satisfaction was significantly lower than only that of the self or privately supported group. With regard to the importance and satisfaction score gap on anticipated needs for post-return professional opportunities and facilities, once again, A.I.D. SPONSORED students showed the narrowest gap, and, for these needs, the students on assistantships and scholarships showed the largest gap. However, these gaps among sponsorship categories did not differ significantly.

Table 25.
Importance of Needs:
Composite Means and Standard Errors by Sponsorship Categories[a].

Composite Number[b]	A.I.D.-Sponsored			Home Government Sponsored			Other Scholarships and Assistantships			Self and Other Private Sources		
	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average
C1	40.89	1.07	5.84	40.96	.39	5.85	40.55	.33	5.79	39.35	.40	5.62
C3	46.87	1.26	5.86	47.01	.49	5.88	45.30	.49	5.66	46.37	.34	5.60
C5	16.70	.44	5.57	16.08	.28	5.36	15.06	.35	5.02	15.42	.14	5.14
C7	17.22	.67	5.74	17.28	.28	5.76	16.01	.38	5.34	16.89	.19	5.63
C9	22.86	.82	5.72	22.94	.38	5.74	22.64	.24	5.66	22.91	.19	5.73
C11	42.61	1.27	6.09	42.38	.63	6.05	41.06	.80	5.87	42.11	.28	6.02
C13	16.83	.45	5.61	15.90	.38	5.30	15.31	.23	5.10	16.15	.19	5.38
C15	16.01	.45	5.34	16.05	.33	5.35	15.21	.16	5.07	15.57	.23	5.19
C17	12.52	.25	6.26	12.38	.16	6.19	12.76	.10	6.38	12.88	.08	6.44
C19	36.67	.98	6.11	36.90	.30	6.15	36.35	.30	6.06	36.71	.38	6.12
C21	22.37	.76	5.59	23.17	.28	5.79	21.49	.25	5.37	23.34	.18	5.84
C23	54.91	2.17	5.49	57.94	1.53	5.79	58.60	.61	5.86	60.28	.72	6.03
C25	54.57	1.25	6.06	55.72	.39	6.19	55.50	.43	6.17	55.86	.62	6.21
C27	30.70	.71	5.12	30.87	.71	5.15	31.12	.36	5.19	32.63	.37	5.44
C29	34.05	1.42	5.68	35.32	.38	5.89	34.35	.42	5.73	34.51	.32	5.75
C31	15.77	1.00	5.26	17.51	.45	5.84	17.53	.28	5.84	16.77	.31	5.59
C33	22.02	1.26	5.51	23.14	.49	5.79	23.76	.49	5.94	22.93	.48	5.73
C35	29.68	.95	5.94	30.63	.46	6.13	30.19	.35	6.04	30.19	.28	6.04
C39	18.30	.52	6.10	18.69	.24	6.23	18.09	.16	6.03	17.67	.32	5.89
C41	18.05	.56	6.02	18.92	.22	6.31	18.76	.11	6.25	18.94	.13	6.31
C43	47.41	1.35	5.93	49.59	.62	6.20	49.90	.31	6.24	47.90	.64	5.99
C45	19.14	.42	6.38	19.62	.21	6.54	19.68	.12	6.56	19.51	.10	6.50
C47	40.97	.96	5.12	41.99	.42	5.25	41.93	.23	5.24	42.32	.23	5.29

a. Means and SE (standard errors of means) are weighted population estimates. Each item average was computed by dividing the composite mean by the number of items included in each composite.

b. For the composite names and items included in each composite, see Table 23.

Table 26.
Satisfaction of Needs:
Composite Means and Standard Errors by Sponsorship Categories[a].

Composite Numbers[b]	A.I.D.-Sponsored			Home Government Sponsored			Other Scholarships and Assistantships			Self and Other Private Sources		
	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average
C2	37.81	.80	5.40	39.17	.40	5.60	38.46	.27	5.49	36.70	.93	5.24
C4	38.24	.77	4.78	40.12	.65	5.02	40.65	.70	5.08	39.27	1.34	4.91
C6	13.96	.35	4.65	14.06	.35	4.69	13.78	.20	4.59	13.70	.27	4.57
C8	14.94	.68	4.98	14.93	.29	4.98	14.73	.32	4.91	13.15	.27	4.38
C10	17.93	.68	4.48	18.37	.31	4.59	18.82	.36	4.71	16.97	.72	4.24
C12	31.96	1.47	4.57	32.34	.84	4.62	32.42	.38	4.63	30.30	.87	4.33
C14	12.05	.42	4.02	12.09	.33	4.03	11.43	.19	3.81	11.51	.33	3.84
C16	11.79	.41	3.93	11.08	.22	3.69	11.59	.18	3.86	10.95	.24	3.65
C18	7.02	.39	3.51	7.14	.25	3.57	7.71	.13	3.86	6.77	.38	3.39
C20	26.95	.77	4.49	29.08	.49	4.83	30.75	.35	5.13	27.38	.66	4.56
C22	16.86	.77	4.22	16.70	.27	4.18	17.69	.21	4.42	15.82	.57	3.96
C24	45.74	1.72	4.57	40.46	.94	4.05	43.75	.97	4.38	39.09	1.22	3.91
C26	46.94	1.24	5.22	46.90	.77	5.21	45.73	.59	5.08	45.52	.82	5.06
C28	26.81	.86	4.47	25.81	.59	4.30	25.89	.45	4.31	26.84	.89	4.47
C30	24.01	1.32	4.00	25.81	.63	4.30	26.50	.46	4.42	25.87	.60	4.31
C32	14.33	.76	4.78	12.81	.78	4.27	13.49	.44	4.50	12.61	.49	4.20
C34	17.78	.92	4.44	17.97	.45	4.49	17.30	.45	4.33	17.79	.62	4.45
C36	24.81	.61	4.96	25.57	.51	5.11	26.06	.31	5.21	23.52	.79	4.70
C40	11.97	.67	3.99	11.71	.31	3.90	11.98	.24	3.99	12.11	.20	4.04
C42	14.78	.50	4.93	14.19	.38	4.73	13.47	.28	4.49	13.32	.38	4.44
C44	32.22	1.19	4.03	34.32	.88	4.29	32.22	.60	4.03	32.60	.66	4.08
C46	17.29	.27	5.76	18.37	.20	6.12	18.24	.16	6.08	17.26	.32	5.75
C48	35.77	.93	4.47	36.71	.55	4.59	37.27	.29	4.66	34.58	1.09	4.32

a. Means and SE (standard errors of means) are weighted population estimates. Each item average was computed by dividing the composite mean by the number of items included in each composite.

b. For the composite names and items included in each composite, see Table 23.

Table 27. Comparisons of Importance and Satisfaction Composites of Needs by Sponsorship Categories

Composite Number[a]	Rank Order of Sponsorship Categories[b] in Importance Composites				Significantly Different Categories[c]	Composite Number[a]	Rank Order of Sponsorship Categories[b] in Satisfaction Composites				Significantly Different Categories[c]
C1	2	1	3	4	2 vs. 4	C2	2	1	4	3	None
C3	2	1	4	3	None	C4	3	2	4	1	None
C5	1	2	4	3	1 vs. 4, 3	C6	2	1	3	4	None
C7	2	1	4	3	2 vs. 3	C8	1	2	3	4	The rest vs. 4
C9	2	4	1	3	None	C10	3	2	1	4	None
C11	1	2	4	3	None	C12	3	2	1	4	None
C13	1	4	2	3	1, 4 vs. 3	C14	2	1	4	3	None
C15	2	1	4	3	None	C16	1	3	2	4	None
C17	4	3	1	2	4 vs. 2	C18	3	2	1	4	None
C19	2	4	1	3	None	C20	3	2	4	1	3 vs. the rest
C21	4	2	1	3	4, 2 vs. 3	C22	3	1	2	4	3 vs. 2, 4
C23	4	3	2	1	None	C24	1	3	2	4	1, 3 vs. 4
C25	4	2	3	1	None	C26	1	2	3	4	None
C27	4	3	2	1	4 vs. the rest	C28	4	1	3	2	None
C29	2	4	3	1	None	C30	3	4	2	1	None
C31	3	2	4	1	None	C32	1	3	2	4	None
C33	3	2	4	1	None	C34	2	4	1	3	None
C35	3	4	2	1	None	C36	3	2	1	4	3 vs. 4
C39	2	1	3	4	None	C40	4	3	1	2	None
C41	4	2	3	1	None	C42	1	2	3	4	None
C43	3	2	4	1	None	C44	1	2	4	3	None
C45	1	3	2	4	None	C46	2	3	1	4	2, 3 vs. 1, 4
C47	4	2	3	1	None	C48	3	2	1	4	None

a. For the composite names and items included, see Table 23.

b. Categories are: 1 = A.I.D.-sponsored, 2 = home government sponsored, 3 = other scholarships and assistantships, 4 = self or private sources. The categories are ranked from high to low reading from left to right.

c. The categories designated differed in their means beyond the .01 level of significance. "None" indicates no significant differences among the categories. For the guide to read this column, see page 71.

behind that was the third high of .14 with the satisfaction composite of needs regarding relevance of education. The correlations indicate that, even though the amount of variation accounting for each composite was rather low, older students tended to be more satisfied with the way academic planning took place and with relevancy of education offered here. They also tended to place more importance on familiar needs, particularly concerned with children.

Hypothesis 8: Importance of needs varies by sex of students.

Hypothesis 9: Satisfaction of needs varies by sex of students.

For most of the composites, sex categories indicated no significant differences. Sex differences in composite scores were found, however, in four composites, in all of which the female students scored higher than the male students. Those composites were all importance composites: needs regarding academic planning (C7), needs for facilitating course work (C21), anticipated post-return needs for material rewards (C41), and secondary goals (C41). As to the satisfaction composites, there were no significant differences between males and females. Female students tended to place higher importance on academic concerns, both in program planning and course work activities, and secondary goals which go beyond obtaining the degree. They were also more concerned about jobs, salaries, and housing upon returning home than male students. Their concern on these post-return needs may very well reflect the sex discrimination they might face upon return to their home countries (Table 28).

Hypothesis 10: Importance of needs varies by marital status of students.

Hypothesis 11: Satisfaction of needs varies by marital status of students.

Students were categorized by marital status as follows: (1) single, (2) married, the spouse with the student, (3) married, the spouse at home, and (4) other. The fourth category was not included in the comparison of categories due to its extremely small size (Tables 29 and 30).

Marital status did not show significant difference in most of the composites. On the other hand, there were three importance composites where significant differences were found among some categories. Married students, both with or without the spouse here, rated information for foreign student life higher than the single students. Conversely, single students rated needs for activities with U.S. nationals higher than married students, with or without the spouse in the U.S.

There were four satisfaction composites where differences were significant. Married students with the spouse at home were less satisfied with their knowledge of community information. Single students were less satisfied with needs regarding academic planning pertaining to the degree programs than married groups. Married students with the spouse at home indicated higher satisfaction with housing needs than married students with the spouse here, though neither group differed significantly from the single students with regard to these needs. Married students with the spouse at home indicated significantly higher anticipated need satisfaction

Table 28. Importance and Satisfaction of Needs: Composite Means and Standard Errors by Sex[a].

	Importance								Satisfaction						
	Female			Male					Female			Male			
Composite Numbers[b]	Mean	SE	Item Average	Mean	SE	Item Average	Significantly Different Categories[c]	Composite Numbers[b]	Mean	SE	Item Average	Mean	SE	Item Average	Significantly Different Categories[c]
C1	40.86	.49	5.84	39.61	.34	5.66	N	C2	36.98	.58	5.28	37.89	.51	5.41	N
C3	46.46	.29	5.81	46.14	.30	5.77	N	C4	39.06	.97	4.88	40.00	.75	5.00	N
C5	15.61	.32	5.20	15.50	.16	5.17	N	C6	13.30	.27	4.43	13.96	.15	4.65	N
C7	17.38	.27	5.79	16.56	.15	5.52	f vs. m	C8	13.59	.34	4.53	14.18	.21	4.73	N
C9	23.13	.34	5.78	22.79	.12	5.69	N	C10	17.56	.55	4.39	17.84	.49	4.46	N
C11	42.54	.44	6.08	41.85	.34	5.98	N	C12	29.85	.80	4.26	31.61	.57	4.52	N
C13	16.21	.21	5.40	15.82	.12	5.27	N	C14	11.06	.28	3.69	11.83	.23	3.94	N
C15	15.81	.23	5.27	15.52	.14	5.17	N	C16	11.16	.25	3.72	11.14	.19	3.71	N
C17	12.94	.13	6.47	12.65	.08	6.32	N	C18	6.93	.34	3.47	7.14	.24	3.57	N
C19	37.31	.59	6.22	36.47	.26	6.08	N	C20	28.25	.89	4.71	28.65	.43	4.77	N
C21	23.70	.24	5.92	22.49	.18	5.62	f vs. m	C22	16.02	.52	4.01	16.69	.34	4.17	N
C23	60.34	.86	6.03	58.85	.54	5.89	N	C24	39.70	2.04	3.97	40.56	.60	4.06	N
C25	56.27	.79	6.25	55.67	.41	6.19	N	C26	45.11	.80	5.01	46.10	.58	5.12	N
C27	31.35	.57	5.23	32.02	.34	5.24	N	C28	26.49	.77	4.42	26.36	.56	4.39	N
C29	35.37	.46	5.89	34.39	.21	5.73	N	C30	25.97	.62	4.33	25.83	.43	4.31	N
C31	16.39	.51	5.46	17.20	.28	5.73	N	C32	13.62	.69	4.54	12.90	.39	4.30	N
C33	23.32	.89	5.83	23.09	.23	5.77	N	C34	17.63	.80	4.41	17.94	.35	4.49	N
C35	30.70	.25	6.14	30.17	.19	6.03	N	C36	24.43	.57	4.89	24.81	.55	4.96	N
C39	18.34	.31	6.11	17.95	.14	5.98	N	C40	12.02	.31	4.01	11.94	.21	3.98	N
C41	19.21	.11	6.40	18.75	.11	6.25	f vs. m	C42	13.55	.32	4.52	13.66	.30	4.55	N
C43	49.54	.44	6.19	48.63	.33	6.08	N	C44	32.59	.76	4.07	33.13	.60	4.14	N
C45	19.70	.16	6.57	19.55	.10	6.52	N	C46	17.92	.24	5.97	17.70	.23	5.90	N
C47	42.86	.28	5.36	41.74	.29	5.22	f vs. m	C48	35.58	.91	4.45	35.72	.62	4.47	N

a, b. See Footnotes a and b in Table 26.

c. See Footnote c in Table 27.

Table 29. Importance of Needs: Composite Means and Standard Errors by Marital Status[a].

Composite Number[b]	Marital Status Categories[c] Category 1 Mean	SE	Item Average	Category 2 Mean	SE	Item Average	Category 3 Mean	SE	Item Average	Significantly Different Categories[d]
C1	39.49	.42	5.64	40.42	.51	5.77	39.76	.91	5.68	N
C3	46.20	.35	5.77	46.40	.34	5.80	45.39	1.05	5.67	N
C5	15.10	.18	5.03	15.98	.22	5.33	16.57	.45	5.52	3, 2 vs. 1
C7	16.79	.19	5.60	16.65	.17	5.55	17.27	.50	5.76	N
C9	22.71	.16	5.68	22.99	.19	5.57	23.20	.46	5.80	N
C11	41.71	.39	5.96	42.34	.32	6.05	42.01	1.42	6.00	N
C13	15.75	.24	5.25	16.08	.19	5.36	16.00	.93	5.33	N
C15	15.43	.20	5.14	15.79	.11	5.26	15.74	.68	5.25	N
C17	12.85	.09	6.43	12.58	.10	6.29	11.98	.40	5.99	N
C19	36.73	.32	6.12	36.56	.24	6.09	36.62	.92	6.10	N
C21	22.78	.23	5.69	22.87	.18	5.72	22.80	.71	5.70	N
C23	59.19	.74	5.92	59.31	.73	5.93	58.57	1.35	5.86	N
C25	56.20	.44	6.24	55.24	.40	6.14	55.64	1.54	6.18	N
C27	32.69	.29	5.45	30.84	.57	5.14	29.99	.83	5.00	1 vs. 2, 3
C29	34.68	.27	5.78	34.57	.23	5.76	34.85	.62	5.81	N
C31[e]	—	—	—	17.51	.22	5.84	—	—	—	—
C33[e]	—	—	—	23.71	.25	5.93	—	—	—	—
C35	30.21	.22	6.04	30.43	.31	6.09	29.97	.99	5.99	N
C39	17.95	.13	5.98	18.16	.21	6.05	17.97	.68	5.99	N
C41	18.84	.12	6.28	18.97	.17	6.32	18.26	.63	6.09	N
C43	48.52	.34	6.07	49.15	.46	6.14	48.65	1.85	6.08	N
C45	19.60	.10	6.53	19.52	.13	6.51	19.76	.25	6.59	N
C47	42.14	.32	5.27	41.98	.39	5.25	41.28	.84	5.16	N

a. Means, SE (standard error of means) are weighted population estimates. Each item average was computed by dividing the composite mean by the number of items included in each composite.

b. For the composite names and items included in each composite, see Table 23.

c. Marital categories: 1 = single; 2 = married, the spouse with the student; 3 = married, the spouse at home. The fourth category was not included in this comparison, due to its extremely small size.

d. Categories listed were significantly different at .01 level. "None" stands for no difference among categories. For the guide to read this column, see page 71.

e. Responded only by category two.

Table 30. Satisfaction of Needs: Composite Means and Standard Errors by Marital Status[a].

Composite Number[b]	Marital Status Categories[c]: Category 1 Mean	SE	Item Average	Category 2 Mean	SE	Item Average	Category 3 Mean	SE	Item Average	Significantly Different Categories[d]
C2	37.38	.60	5.34	38.23	.42	5.46	36.03	1.67	5.15	N
C4	39.60	.69	4.95	40.40	.87	5.05	35.01	1.48	4.38	2, 1 vs. 3
C6	13.53	.16	4.51	14.24	.23	4.75	12.61	.68	4.20	N
C8	13.57	.23	4.52	14.53	.28	4.84	14.96	.63	4.99	3, 2 vs. 1
C10	17.68	.33	4.42	17.81	.64	4.45	17.78	1.32	4.45	N
C12	30.47	.48	4.35	32.06	1.03	4.58	31.17	1.02	4.45	N
C14	11.39	.20	3.80	11.99	.42	4.00	11.31	.74	3.77	N
C16	10.95	.17	3.65	11.42	.31	3.81	10.97	.51	3.66	N
C18	6.66	.20	3.33	7.65	.38	3.82	7.37	.37	3.68	N
C20	28.01	.40	4.67	29.33	.51	4.89	27.06	1.79	4.51	N
C22	16.39	.31	4.10	16.75	.43	4.19	15.15	.54	3.79	N
C24	40.15	1.45	4.01	41.04	.86	4.10	37.44	2.74	3.74	N
C26	45.90	.58	5.10	46.15	.59	5.13	42.86	1.86	4.76	N
C28	26.70	.38	4.45	26.30	.82	4.38	22.85	1.50	3.81	N
C30	25.27	.44	4.21	27.03	.57	4.50	23.30	.93	3.88	2 vs. 3
C32[e]	—	—	—	13.10	.41	4.37	—	—	—	—
C34[e]	—	—	—	18.07	.31	4.52	—	—	—	—
C36	24.23	.44	4.85	25.39	.63	5.08	24.88	1.27	4.98	N
C40	11.73	.16	3.91	12.31	.26	4.10	12.21	.79	4.07	N
C42	13.39	.20	4.46	13.77	.43	4.59	15.31	.55	5.10	3 vs. 1
C44	32.47	.46	4.06	33.61	.88	4.20	34.02	1.69	4.25	N
C46	17.49	.19	5.83	18.01	.25	6.00	18.16	.34	6.05	N
C48	35.10	.60	4.39	36.51	.57	4.56	34.07	1.91	4.26	N

a. Means, SE (standard error of means) are weighted population estimates. Each item average was computed by dividing the composite mean by the number of items included in each composite.

b. For the composite names and items included in each composite, see Table 23.

c. Marital categories: 1 = single; 2 = married, the spouse with the student; 3 = married, the spouse at home. The fourth category was not included in this comparison, due to its extremely small size.

d. Categories listed were significantly different at .01 level. "None" stands for no difference among categories. For the guide to read this column, see page 71.

e. Responded only by category two.

regarding post-return material needs which include appropriate jobs, salaries, and housing.

Hypothesis 12: Importance of needs varies by the command of English students have.

Hypothesis 13: Satisfaction of needs varies by the command of English students have.

The command of English was measured by two measures; (1) TOEFL score ranges, and (2) the self evaluation composite of English skills (C50). Most of the need composites, both importance and satisfaction, indicated highly significant correlation coefficients from a statistical point of view. However, when the coefficients were examined substantively, TOEFL score ranges did not account for 5% or more of the variation in any one of the composites.[9] The three highest correlation coefficients were found between the TOEFL ranges and the following composites; importance ($r = .14$) and satisfaction ($r = .12$) of needs for facilitating course work and importance of general family needs ($r = .15$).

The self evaluation composite of English skills showed several highly significant and substantive relationships with several composites, in accounting for more than 10% of variation in each composite. The correlation was positive for every one of the following relationships: (1) satisfaction of needs regarding university environment ($r = .36$), (2) satisfaction of needs for facilitating course work ($r = .43$), (3) likelihood to achieve primary goals ($r = .44$), and (4) secondary goals ($r = .43$). Stated another way, those students who had a greater command of English skills tended to be more satisfied with the university environment; i.e. measured as a composite of understanding the grading system and course requirements, opportunities to discuss course work with faculty members, getting advice from academic advisors, being respected as a fellow human being by U.S. students, and having magazines and newspapers from their countries available in the university library. In addition, they were more satisfied with needs for being able to take class notes well, having extra time in taking exams, having opportunities to discuss course work with U.S. students, and having publications available in one's area of study from one's country at the library. They were more confident in achieving the secondary goals, i.e. obtaining broader experiences in the U.S. than the others.

The same composite accounted for 5% or more but less than 10% of variation in the following composites; (1) satisfaction with needs for university information ($r = .31$), (2) satisfaction with needs for community information ($r = .28$), (3) satisfaction with needs regarding academic relationships ($r = .23$), (4) satisfaction with needs regarding living in a U.S. community ($r = .29$), (5) satisfaction with needs for activities with U.S. nationals ($r = .31$), and (6) satisfaction with needs regarding relationships

[9] For this preliminary analysis, correlation coefficients were used. However, we consider ANOVA would be more appropriate for further analysis, since TOEFL scores were recorded by ranges rather than raw scores.

with faculty and staff (r = .29). The correlation coefficients were all positive.[30] All in all, English language skills appear to be a strong predictor of satisfaction with needs, particularly those of an informational and interpersonal nature.

Hypothesis 14: Importance of needs varies by graduate vs. undergraduate status of students.

Hypothesis 15: Satisfaction of needs varies by graduate vs. undergraduate status of students.

Graduate and undergraduate students did not differ in most of the composites. However, significant differences were noted in seven importance composites, and in four satisfaction composites. Graduate students placed higher importance on needs for university information than undergraduate students, while they did not differ significantly in terms of satisfaction (See Table 31).

Undergraduate students placed higher importance than graduate students on six composites. They considered needs regarding academic planning more important than graduate students did, while graduate students were more satisfied than undergraduate students with the same needs. With needs for practical experience and needs regarding university environment, the same differences were noted, i.e. higher importance placed by undergraduate students and higher satisfaction indicated by graduate students.

With regard to the following need composites, undergraduate students placed significantly higher importance, while no difference was noted as to satisfaction between these two categories of students: needs for facilitating course work, financial needs, and needs for activities with U.S. nationals. Even though not significant, graduate students did score slightly higher than undergraduate students in satisfaction of the first two, while the third one was scored higher by undergraduate students.

Graduate students indicated higher satisfaction with needs for interaction with faculty and staff, while their importance score did not differ significantly from that of undergraduate students. With regard to most of the needs, students did not differ by graduate and undergraduate status. However, where significant differences were found, graduate students tended to be more satisfied than undergraduate students, while undergraduate students tended to feel stronger needs than graduate students in certain issues.

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[30] In addition, we found the self-evaluation composite of English skills accounted for more than 5% of variation in importance composites of barriers to establish good relationships. Understandably, the correlation was negative in this case. Students with higher command of English placed less importance on the barriers than others.

Table 31. Importance and Satisfaction of Needs: Composite Means and Standard Errors by Classification[a].

	Classification Categories[c].														
	Importance							Satisfaction							
	Category 1			Category 2				Category 1			Category 2				
Composite Numbers[b].	Mean	SE	Item Average	Mean	SE	Item Average	Significantly Different Categories[c].	Composite Numbers[b].	Mean	SE	Item Average	Mean	SE	Item Average	Significantly Different Categories[c].
C1	38.63	.47	5.52	40.70	.24	5.81	2 vs. 1	C2	37.14	.78	5.31	37.80	.40	5.40	N
C3	46.41	.54	5.80	46.11	.32	5.76	N	C4	38.99	1.10	4.87	39.90	.62	4.99	N
C5	15.70	.18	5.23	15.45	.17	5.15	N	C6	13.26	.27	4.42	13.95	.11	4.65	N
C7	17.24	.11	5.75	16.54	.21	5.51	1 vs. 2	C8	13.19	.24	4.40	14.49	.20	4.83	2 vs. 1
C9	22.77	.23	5.69	22.87	.12	5.72	N	C10	17.11	.51	4.28	18.09	.42	4.52	N
C11	42.43	.38	6.06	41.75	.37	5.96	N	C12	30.43	.64	4.35	31.70	.57	4.53	N
C13	16.17	.22	5.39	15.76	.16	5.25	N	C14	11.52	.33	3.84	11.70	.24	3.90	N
C15	15.77	.23	5.26	15.53	.13	5.18	N	C16	10.86	.28	3.62	11.25	.17	3.75	N
C17	13.04	.07	6.52	12.51	.12	6.26	1 vs. 2	C18	6.29	.26	3.14	7.47	.24	3.73	2 vs. 1
C19	37.44	.24	6.24	36.28	.24	6.05	1 vs. 2	C20	26.81	.60	4.47	29.32	.41	4.89	2 vs. 1
C21	23.55	.19	5.89	22.28	.21	5.57	1 vs. 2	C22	15.57	.58	3.89	17.08	.20	4.27	N
C23	61.61	.65	6.16	58.22	.56	5.82	1 vs. 2	C24	38.51	1.67	3.85	41.41	.66	4.14	N
C25	56.75	.73	6.31	55.18	.30	6.13	N	C26	45.38	.71	5.04	46.00	.51	5.11	N
C27	32.91	.42	5.49	31.06	.41	5.18	1 vs. 2	C28	26.57	.65	4.43	26.11	.38	4.35	N
C29	35.03	.41	5.84	34.48	.26	5.75	N	C30	25.53	.71	4.25	25.95	.36	4.32	N
C31	16.53	.44	5.51	17.16	.29	5.72	N	C32	12.32	.73	4.11	12.87	.38	4.29	N
C33	22.76	.78	5.69	23.14	.24	5.78	N	C34	17.38	1.00	4.35	17.78	.25	4.44	N
C35	30.51	.20	6.10	30.15	.24	6.03	N	C36	23.03	.76	4.61	25.54	.45	5.11	2 vs. 1
C39	18.31	.19	6.10	17.90	.19	5.97	N	C40	11.53	.35	3.84	12.10	.16	4.03	N
C41	19.19	.18	6.40	18.72	.13	6.24	N	C42	13.88	.32	4.63	13.57	.30	4.52	N
C43	48.57	.54	6.07	48.95	.36	6.12	N	C44	33.36	.70	4.17	32.76	.53	4.09	N
C45	19.77	.13	6.59	19.49	.12	6.50	N	C46	17.45	.36	5.82	17.92	.13	5.97	N
C47	42.70	.41	5.34	41.74	.38	5.22	N	C48	33.98	1.18	4.25	36.51	.35	4.46	N

a. See Footnote a, Table 29.

b. See Footnote b, Table 29.

c. Classification categories: 1 = Undergraduate, 2 = Graduate.

d. See Footnote d, Table 29

Hypothesis 16: Importance of needs varies by major field of students.

Hypothesis 17: Satisfaction of needs varies by major field of students.

Major fields of study were grouped into the following five categories: (1) engineering, (2) agriculture, (3) natural and life sciences, (4) social sciences, and (5) other. With regard to importance of needs, the hypothesis was supported by ten composites, while no significant differences among categories were found in the remaining thirteen composites (See Tables 32 and 33).

On needs for academic planning, students in agriculture placed higher importance than engineering students, while they did not differ significantly from the rest. On needs for relevancy of education and needs for training to apply knowledge, agricultural students again placed higher importance than students in engineering and natural and life sciences. On needs for extracurricular learning experiences, they placed higher importance than students in other fields, except they did not differ significantly from students in social sciences. They, along with the fifth category of students, placed higher importance than engineering students on needs for facilitating course work and needs regarding university environments (need for understanding the grading system, course requirements, opportunities to discuss course materials with faculty members, etc.). On housing needs, they placed higher importance than those in engineering and social sciences, while they did not differ significantly from the rest. They placed higher importance than the rest (except those in natural and life sciences) on needs for pre-return information. On anticipated post-return needs, both for material rewards and for professional opportunities and facilities, they placed higher importance than those in engineering and in the fifth category. On anticipated post-return needs for professional opportunities and facilities, students in natural and life sciences also placed higher importance than the rest. At this stage of our data analysis, we were not able to give a good explanation as to why students in agriculture stood out in importance composite scores.

With regard to satisfaction, we found significant differences in three composites. With satisfaction of needs regarding academic planning, students in agriculture not only ranked the highest in the importance score but also in the satisfaction score, being significantly different from students in the fifth category. With regard to satisfaction of needs for practical experiences, students in natural and life sciences (the highest) were significantly different from those in engineering (the lowest). Students in agriculture were more satisfied than those in social sciences and in the fifth category. We feel the above findings with major field categories can be explained only with further analysis, since we suspect there are some confounding factors we do not know about at this point of data analysis. Since the students in agriculture mostly did not differ from others but ranked high or middle with regard to satisfaction, we consider the above findings with importance scores might be an indication that they were more concerned about these needs for some unknown reasons rather than they were more dissatisfied, particularly with relevancy and application of education, academic matters and post-return situations.

Table 32. Importance of Needs: Composite Means and Standard Errors by Major, Recoded[a].

Composite Number[b]	Major Categories[c] Category 1 Mean	SE	Item Average	Category 2 Mean	SE	Item Average	Category 3 Mean	SE	Item Average	Category 4 Mean	SE	Item Average	Category 5 Mean	SE	Item Average	Significantly Different Categories[d]
C1	39.06	.69	5.58	41.05	.65	5.86	40.45	.84	5.78	39.54	.73	5.65	40.06	.32	5.72	N
C3	46.09	.35	5.76	46.60	.86	5.83	45.34	.92	5.67	43.79	1.16	5.47	46.82	.35	5.85	N
C5	15.33	.17	5.11	15.63	.38	5.21	15.42	.51	5.14	14.92	.60	4.97	15.73	.16	5.24	N
C7	16.28	.24	5.43	17.51	.36	5.84	16.49	.54	5.50	16.21	.73	5.40	17.01	.19	5.67	2 vs. 1
C9	22.53	.32	5.63	23.06	.49	5.77	22.90	.37	5.73	22.85	.66	5.71	22.98	.20	5.75	N
C11	41.48	.45	5.93	43.89	.78	6.27	40.39	.68	5.77	43.24	1.55	6.18	41.97	.29	6.00	2 vs. 1, 3
C13	15.58	.22	5.19	17.30	.49	5.77	14.05	.49	4.68	16.06	.67	5.35	16.15	.16	5.38	2 vs. 1 vs. 3
C15	15.35	.18	5.12	16.67	.36	5.56	15.35	.37	5.12	15.37	.68	5.12	15.62	.15	5.21	2 vs. 5, 1, 3
C17	12.80	.12	6.40	12.72	.23	6.36	12.63	.18	6.31	12.41	.26	6.20	12.74	.11	6.37	N
C19	35.83	.31	5.97	37.54	.43	6.26	36.20	.47	6.03	37.07	.68	6.18	36.97	.29	6.16	2, 5 vs. 1
C21	22.01	.19	5.50	23.40	.41	5.85	22.20	.43	5.55	23.01	.57	5.75	23.18	.19	5.79	2, 5 vs. 1
C23	59.56	.57	5.96	59.89	1.17	5.99	57.57	1.05	5.76	60.09	1.52	6.01	59.08	.83	5.91	N
C25	55.45	.52	6.16	57.85	.98	6.43	56.37	1.01	6.26	53.70	1.37	5.97	55.90	.66	6.21	N
C27	32.25	.45	5.38	32.67	.79	5.44	31.66	.61	5.28	30.29	1.02	5.05	31.78	.24	5.30	N
C29	34.29	.34	5.71	36.43	.54	6.07	34.47	.69	5.74	33.69	.89	5.61	34.71	.41	5.79	2 vs. 1, 4
C31	17.54	.22	5.85	18.20	.46	6.07	15.85	.90	5.28	16.73	.46	5.58	17.02	.37	5.67	N
C33	23.14	.39	5.78	24.47	.59	6.12	21.26	1.44	5.31	24.51	.47	6.13	22.86	.49	5.72	N
C35	30.05	.25	6.01	31.01	.42	6.20	30.73	.40	6.15	29.82	.91	5.96	30.29	.21	6.06	N
C39	17.65	.18	5.88	18.92	.20	6.31	18.27	.35	6.09	16.72	.73	5.57	18.23	.16	6.08	2 vs. 5, 1, 4
C41	18.83	.21	6.28	19.63	.14	6.54	18.99	.28	6.33	19.07	.20	6.36	18.68	.14	6.23	2 vs. 1, 5
C43	48.21	.47	6.03	50.58	.64	6.32	50.52	.71	6.32	49.44	.72	6.18	48.30	.40	6.04	2, 3 vs. 5, 1
C45	19.51	.11	6.50	19.83	.12	6.61	19.71	.12	6.57	19.63	.25	6.54	19.53	.12	6.51	N
C47	41.96	.24	5.25	42.62	.74	5.33	42.26	.48	5.28	41.24	1.13	5.16	41.99	.24	5.25	N

A. See Footnote a, Table 27.

b. See Footnote b, Table 29.

c. Recoded Major Categories: 1 = Engineering, 2 = Agriculture, 3 = Natural Life Sciences, 4 = Social Sciences, 5 = Others.

d. See Footnote d, Table 29

Table 33. Satisfaction of Needs: Composite Means and Standard Errors by Major, Recoded[a].

	Major Categories[c].															
	Category 1			Category 2			Category 3			Category 4			Category 5			
Composite Number[b].	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Significantly Different Categories[d].
C2	37.50	.56	5.36	39.34	1.00	5.62	38.75	.44	5.54	37.02	.76	5.29	37.31	.69	5.33	N
C4	39.75	.76	4.97	39.49	1.79	4.94	40.13	.81	5.02	39.28	1.23	4.91	39.74	1.03	4.97	N
C6	13.73	.32	4.58	13.93	.34	4.64	13.33	.26	4.44	13.80	.28	4.60	13.85	.19	4.62	N
C8	14.12	.34	4.71	15.18	.45	5.06	14.67	.49	4.89	13.37	.58	4.46	13.79	.27	4.60	2 vs. 5
C10	17.61	.41	4.40	18.91	.32	4.73	18.80	.45	4.70	18.30	.74	4.58	17.37	.75	4.34	[illegible]
C12	31.51	.38	4.50	31.57	.66	4.51	32.56	1.01	4.65	30.33	.90	4.33	30.79	1.02	4.40	N
C14	11.40	.29	3.80	12.37	.47	4.12	11.63	.33	3.88	11.50	.28	3.83	11.62	.40	3.87	N
C16	10.98	.35	3.66	11.40	.31	3.80	11.72	.32	3.91	10.52	.53	3.51	11.19	.23	3.73	N
C18	6.67	.23	3.34	7.37	.24	3.68	8.05	.40	4.02	6.92	.37	3.46	7.07	.36	3.53	3 vs. 1
C20	28.69	.53	4.78	28.90	.63	4.82	29.59	.79	4.93	28.66	.85	4.78	28.15	.58	4.69	N
C22	17.17	.40	4.29	16.89	.37	4.22	17.21	.53	4.30	16.06	.69	4.01	16.09	.42	4.02	N
C24	41.32	.93	4.13	40.66	2.42	4.07	44.02	1.77	4.40	37.92	1.83	3.79	39.95	1.05	3.99	N
C26	44.99	1.07	5.00	45.04	1.57	5.00	46.81	.95	5.20	45.80	1.22	5.09	46.30	.41	5.14	N
C28	26.24	.84	4.37	26.08	.82	4.35	27.32	1.03	4.55	26.17	.83	4.36	26.36	.52	4.39	N
C30	26.12	.96	4.35	24.72	1.06	4.12	27.02	.65	4.50	25.81	.97	4.30	26.65	.46	4.27	N
C32	13.97	.36	4.66	14.77	.50	4.92	13.96	.64	4.65	11.61	.59	3.87	12.63	.54	4.21	2, 1, 3 vs. 4, 2 vs. 5
C34	17.56	.83	4.39	18.79	.64	4.70	18.12	.85	4.53	16.91	1.28	4.23	18.01	.51	4.50	N
C36	24.20	.60	4.84	26.38	.80	5.28	25.87	.68	5.17	25.41	.79	5.08	24.45	.75	4.89	N
C40	12.31	.28	4.10	11.90	.31	3.97	12.62	.54	4.21	11.64	.45	3.88	11.75	.29	3.92	N
C42	13.16	.20	4.39	14.18	.42	4.73	13.22	.46	4.41	13.84	.50	4.61	13.84	.43	4.61	N
C44	31.60	.55	3.95	33.14	.85	4.14	32.75	1.63	4.09	35.31	1.82	4.41	33.39	.72	4.17	N
C46	17.34	.27	5.78	17.56	.30	5.85	17.70	.30	5.90	18.03	.35	6.01	17.93	.31	5.98	N
C48	34.71	.54	4.34	36.56	.77	4.57	36.54	1.00	4.57	35.77	.50	4.47	35.82	1.01	4.48	N

A. See Footnote a, Table 29.

b. See Footnote b, Table 29.

c. Recoded Major Categories: 1 = Engineering, 2 = Agriculture, 3 = Natural Life Sciences, 4 = Social Sciences, 5 = Others.

d. See Footnote d, Table 29

Hypothesis 18: Importance of needs varies by length of stay in the U.S. and at the school.

Hypothesis 19: Satisfaction of needs varies by length of stay in the U.S. and at the school.

Length of stay was measured by the total months of stay in the U.S. and the total months of stay at the university of current enrollment. Both measures correlated significantly with most of the composites. However, none explained 5% or more of variation in any composite of needs. Among the correlations of the total months of stay in the U.S. with need composites, the highest three were with satisfaction of needs for activities with U.S. nationals ($r = .17$), satisfaction of needs for community information ($r = .16$), and importance of general family needs ($r = .15$). Among the correlations of the total months of stay at the school, the highest three were with the satisfaction scores of the following need composites: 1) needs for university information, 2) needs for foreign student life information, and 3) needs regarding living in a U.S. community. All of the above three correlations were positive and the same ($r = .14$).

Hypothesis 20: Importance of needs varies by the region of the world from which they come.

Hypothesis 21: Satisfaction of needs varies by the region of the world from which they come.

The regions included for comparisons were 1) Africa, 2) South and East Asia, 3) Southwest Asia (or the Neart East), and 4) Latin America. Europe was excluded from this analysis, since only two countries, Portugal and Turkey, were included in the study and students from these two countries were comparatively very small in number.

As to importance of needs, twelve composite scores were significantly different among the regions. Mainly, the differences were found between African and Asian students on the composites, while students from Latin America were found not to be significantly different from students of other regions (See Table 34).

African students placed higher importance than students from South and East Asia on the following need composites: 1) needs for community information, 2) needs regarding relationships with faculty and staff, and 3) anticipated post-return needs for material rewards. In other words, African students ranked highest and South and East Asian students ranked lowest in placing importance on the above listed needs and they were significantly different in their importance scores. African students also placed higher importance than Southwest Asians on needs for foreign student life information, and needs regarding the university environment. Students from African placed higher importance than both of these Asian groups on the following need composites: 1) needs for training to apply knowledge, 2) needs for relevancy of education, 3) needs regarding living in a U.S. community, and 4) anticipated post-return needs for professional opportunities and facilities. They, along with students from Latin American, placed higher importance than Asian students on pre-return information needs. Finally, African students placed a higher importance on needs regarding extracurricular learning opportunities than the rest.

Students from Latin America ranked the highest in placing importance on needs regarding academic planning and scored significantly different from those from South and East Asia, the lowest ranked.

Students from Latin America were overall the most satisfied group, while those from Southwest Asia (or the Near East)[11] appeared to be the least satisfied group. There were only three satisfaction composites where no significant differences were found among regions: 1) needs regarding academic planning, 2) needs for relevance of education, and 3) needs of the spouse (See Table 35).

Students from Latin America rated the highest in satisfaction, when Europeans were excluded from the comparison, in the following need composites and significantly higher than the students from the other three regions: 1) needs for community information, 2) needs regarding living in a U.S. community, 3) needs for activities with U.S. nationals, and 4) housing needs. All of them pertained to community living and interaction with local community members. This might be an indication of self-perceived acceptance of this group being higher than the rest.[12] They also ranked the highest in satisfaction with the following need composites and significantly higher than the following groups: 1) needs for university information (higher than students from both Asian regions), 2) needs for foreign student life information (higher than African students), 3) needs regarding academic planning (higher than African and Southwest Asian students), 4) needs for extracurricular learning opportunities (higher than students from Africa and Southwest Asia), 5) needs for facilitating course work and financial needs (along with students from South and East Asia both higher

[11] Predominantly students from Iran, even though Lebanon, Israel, Jordan, Iraq, etc. were included in this region. Data had been collected before the "hostage crisis" in Iran took place.

[12] We analyzed two individual need items relating to perception of acceptance. The satisfaction scores of "need for being treated as fairly as U.S. students by faculty members" and "need for being respected as a fellow human being by U.S. students" were compared among regions of the world. The results indicated the following tendencies. As to the need for fair treatment by faculty members, Southwest Asian students (predominantly Iranians) were the least satisfied group, followed by African students. The most satisfied group was students from Europe, followed by those from Latin America. As to the need for human respect by U.S. students, once again, students from Latin America and Europe were the two most satisfied groups, with students from Southwest Asia and Africa again being the least satisfied groups. For both measures, students from South and East Asia remained at the middle ranking. Even though the average score for any regional group was higher than 4.00 (above the neutral point and on the side of being satisfied rather than dissatisfied), only the average scores of Latin Americans and Europeans exceeded 5.00 (between "somewhat satisfied" and "quite satisfied").

We might add the following preliminary findings; those who were definitely planning to go home were the least satisfied group of students with regard to the need for equal treatment by faculty members. African students, who were least satisfied with the need for human treatment by U.S. students and second least satisfied with the need for equal treatment by faculty members, were the group who indicated the least intention to stay in the U.S. permanently. The European and Southwest Asian students took the first and second high scores in terms of intention to remain in the U.S. permanently, even though the highest average score (European group) was only between "undecided" and "somewhat unlikely to remain permanently" in the U.S.

Table 34.
Importance of Needs: Composite Means and Standard Errors by Region[a].

Composite Number[b]	Region 1 Mean	Region 1 SE	Region 1 Item Avg.	Region 2 Mean	Region 2 SE	Region 2 Item Avg.	Region 3 Mean	Region 3 SE	Region 3 Item Avg.	Region 4 Mean	Region 4 SE	Region 4 Item Avg.	Significantly Different Regions[d]
	Region Categories[c]:												
C1	40.09	.30	5.73	40.71	.39	5.82	38.88	.83	5.55	39.31	.51	5.62	N
C3	47.43	.38	5.93	45.65	.30	5.71	46.30	.78	5.79	46.69	.99	5.84	1 vs. 2
C5	16.23	.26	5.41	15.69	.15	5.23	14.98	.29	4.99	15.17	.50	5.06	1 vs. 3
C7	17.24	.27	5.75	16.36	.23	5.45	16.80	.33	5.60	17.26	.19	5.75	4 vs. 2
C9	22.92	.25	5.65	22.88	.16	5.72	22.79	.56	5.70	23.05	.28	5.76	N
C11	43.50	.50	6.21	41.93	.24	5.99	40.98	.67	5.85	42.38	.62	6.05	1 vs. 2, 3
C13	16.93	.31	5.66	15.87	.16	5.29	15.08	.28	5.03	15.89	.38	5.30	1 vs. 2, 3
C15	16.94	.17	5.65	15.36	.11	5.12	14.83	.39	4.94	15.59	.37	5.20	1 vs. 4, 2, 3
C17	12.79	.20	6.39	12.66	.10	6.09	12.97	.15	5.99	12.54	.22	6.19	N
C19	37.72	.42	6.29	36.53	.24	6.09	35.93	.44	5.99	37.12	.41	6.19	1 vs. 3
C21	22.38	.54	5.60	22.53	.19	5.63	23.29	.25	5.82	23.40	.43	5.85	N
C23	59.84	1.22	5.98	58.75	.59	5.88	59.99	1.23	6.00	59.11	1.26	5.91	N
C25	58.23	.48	6.47	55.18	.46	6.13	54.49	.70	6.05	56.13	.85	6.24	1 vs. 2, 3
C27	30.84	.69	5.14	31.74	.25	5.29	32.44	.61	5.41	32.62	.41	5.44	N
C29	34.46	.45	5.74	34.51	.26	5.75	34.62	.64	5.77	35.28	.56	5.88	N
C31	16.47	.79	5.49	16.67	.23	5.56	17.99	.61	6.00	17.67	.39	5.89	N
C33	23.26	.68	5.81	22.56	.46	5.64	24.06	1.21	6.01	23.75	.41	5.94	N
C35	30.95	.31	6.19	29.84	.18	5.97	30.12	.40	6.02	30.63	.34	6.13	1 vs. 2
C39	18.84	.28	6.28	17.87	.16	5.96	17.14	.35	5.71	18.75	.29	6.25	1, 4 vs. 2, 3
C41	19.24	.16	6.41	18.50	.21	6.17	19.18	.26	6.39	18.95	.30	6.32	1 vs. 2
C43	50.37	.62	6.32	48.48	.50	6.06	47.26	.56	5.91	49.76	1.10	6.22	1 vs. 2, 3
C45	19.93	.21	6.64	19.45	.09	6.48	19.52	.20	6.51	19.69	.21	6.56	N
C47	41.51	.81	5.19	41.80	.27	5.23	42.12	.47	5.26	43.18	.83	5.40	N

a. See Footnote a., Table 29.
b. See Footnote b., Table 29.
c. Region categories: 1 = Africa, 2 = South and East Asia, 3 = Southwest Asia, 4 = Latin America. Europe was not included due to its extremely small size.
d. See Footnote d., Table 29.

Table 35. Satisfaction of Needs: Composite Means and Standard Errors by Region[a].

Composite Number[b]	Region Categories[c]: Region 1 Mean	SE	Item Avg.	Region 2 Mean	SE	Item Avg.	Region 3 Mean	SE	Item Avg.	Region 4 Mean	SE	Item Avg.	Significantly Different Regions[d]
C2	38.21	.74	5.46	36.84	.48	5.26	36.73	.81	5.25	39.49	.49	5.66	4 vs. 2, 3
C4	38.19	.74	4.77	39.49	.72	4.94	37.64	1.03	4.70	44.09	.76	5.51	4 vs. 2, 1, 3
C6	12.99	.30	4.33	13.78	.20	4.59	13.94	.34	4.65	14.39	.27	4.80	4 vs. 1
C8	14.08	.36	4.69	13.95	.31	4.65	13.80	.55	4.60	14.69	.42	4.90	N
C10	17.83	.29	4.46	18.10	.43	4.53	16.15	1.01	4.04	19.03	.36	4.76	4 vs. 1, 3
C12	32.41	.99	4.63	32.20	.42	4.60	28.23	1.54	4.03	31.67	.85	4.53	N
C14	12.48	.29	4.16	11.77	.19	3.92	10.67	.46	3.56	11.70	.36	3.90	1 vs. 3
C16	10.73	.45	3.58	11.62	.22	3.87	10.34	.34	3.45	11.73	.24	3.91	4 vs. 1, 3; 2 vs. 3
C18	6.84	.25	3.42	7.68	.19	3.84	6.05	.63	3.02	7.41	.37	3.70	2 vs. 1
C20	28.57	.71	4.76	29.09	.52	4.85	26.72	.67	4.45	29.85	.44	4.98	4, 2 vs. 3
C22	16.27	.26	4.07	17.38	.20	4.35	14.74	.86	3.68	17.44	.45	4.36	4, 2 vs. 3
C24	36.43	1.48	3.64	42.59	1.07	4.26	38.32	1.73	3.83	42.56	2.29	4.26	2 vs. 1
C26	44.24	.73	4.92	45.75	.52	5.08	43.60	.82	4.84	50.64	.89	5.63	4 vs. 3, 1, 3
C28	24.16	.72	4.03	25.94	.45	4.32	26.01	1.00	4.33	30.31	.62	5.05	4 vs. 3, 2, 1
C30	22.79	.90	3.80	25.66	.51	4.28	25.70	.59	4.28	29.63	.63	4.94	4 vs. 2, 3 vs. 1
C32	12.13	1.07	4.04	13.54	.47	4.51	11.53	.84	3.84	13.83	.40	4.61	N
C34	17.77	.95	4.44	18.07	.38	4.52	16.51	.65	4.13	18.81	.42	4.70	4 vs. 3
C36	25.84	.42	5.17	24.84	.46	4.97	22.43	1.10	4.49	26.19	.50	5.24	4, 1 vs. 3
C40	11.03	.37	3.68	12.60	.28	4.20	11.70	.23	3.90	11.66	.59	3.89	2 vs. 1
C42	14.83	.26	4.94	13.45	.28	4.48	12.52	.58	4.17	14.26	.45	4.75	1 vs. 2, 3
C44	35.02	.74	4.38	32.86	.47	4.11	30.39	.68	3.80	34.55	.85	4.32	1, 4, 2 vs. 3
C46	18.66	.18	6.23	17.75	.21	5.92	16.53	.33	5.51	18.54	.16	6.18	1, 4 vs. 2 vs. 3
C48	35.76	.59	4.47	36.32	.63	4.54	32.69	1.32	4.09	38.31	.49	4.79	4 vs. 1, 3

a. See Footnote a, Table 29.
b. See Footnote b, Table 29.
c. Region categories: 1 = Africa, 2 = South and East Asia, 3 = Southwest Asia, 4 = Latin America. Europe was not included due to its extremely small size.
d. See Footnote d, Table 29.

than those from Southwest Asia), 6) general family needs (higher than those from Southwest Asia), 7) needs regarding relationships with faculty and staff (about the same as African students, but higher than those from Southwest Asia), 8) anticipated post-return needs for material rewards (along with Africans, the highest ranked, and those from South and East Asia, all higher than those from Southwest Asia), 9) perceived likelihood to achieve primary goals (along with African students higher than the rest, the lowest ranked being those from Southwest Asia), and 10) perceived likelihood to achieve secondary goals (higher than those from Africa and Southwest Asia).

Students from Africa ranked the highest in satisfaction with needs for training to apply knowledge and significantly higher than those from Southwest Asia, the lowest ranked in this composite. Africans also ranked highest in satisfaction with anticipated post-return needs for material rewards and significantly higher than those from both regions of Asia. South and East Asian students scored the highest in satisfaction of pre-return information needs and significantly higher than those from Africa, the lowest ranked in this composite.

Hypothesis 22: Importance of needs varies by whether or not students participated in orientation programs.

Hypothesis 23: Satisfaction of needs varies by whether or not students participated in orientation programs.

Participation in orientation programs was measured by the following categories: 1) did not attend at all, 2) attended only in the U.S., 3) attended only in home country, and 4) attended orientations both in home country and in the U.S. As to the importance of needs, variation was noted by orientation experience in the following needs composites. Those who attended orientation programs both in home countries and in the U.S. ranked the highest with regard to importance placed on needs for university information and were significantly higher than those who did not attend at all (first category). Those who attended orientation programs only in home countries ranked the lowest with regard to importance placed on needs for training to apply knowledge and significantly lower than the other three categories. Those who attended orientation programs only in the U.S. ranked the highest in placing importance on financial needs and significantly different from the rest except for those who did not attend orientation programs at all. However, overall, it appears that orientation experiences did not make much difference in perceived importance of most needs among students. As to satisfaction, none of the composites were found to be significantly different by orientation experience of the students (See Tables 36 and 37).

Hypothesis 24: Importance of needs varies by the amount of previous international experience students had.

Hypothesis 25: Satisfaction of needs varies by the amount of previous international experience students had.

Table 36.
Importance of Needs: Composite Means and Standard Errors by Orientation[a].

Composite Number[b]	Orientation Categories[c]. Category 1 Mean	SE	Item Avg.	Category 2 Mean	SE	Item Avg.	Category 3 Mean	SE	Item Avg.	Category 4 Mean	SE	Item Avg.	Significantly Different Categories[d].
C1	38.46	.54	5.49	39.81	.63	5.69	39.75	.97	5.68	40.62	.31	5.80	4 vs. 1
C3	46.44	.59	5.81	46.33	.52	5.79	45.86	1.37	5.73	46.04	.27	5.75	N
C5	15.13	.37	5.04	15.54	.31	5.18	14.94	.82	4.98	15.72	.18	5.24	N
C7	16.96	.33	5.65	16.58	.25	5.53	15.97	.48	5.32	16.90	.20	5.63	N
C9	22.90	.40	5.73	22.81	.33	5.70	21.72	.62	5.43	22.87	.20	5.72	N
C11	42.16	.65	6.02	42.73	.60	6.10	40.15	1.37	5.74	41.90	.43	5.99	N
C13	16.26	.44	5.42	16.43	.29	5.48	13.90	.75	4.63	15.77	.26	5.26	2, 1, 4 vs. 3
C15	15.61	.33	5.20	15.97	.27	5.32	15.38	.43	5.13	15.47	.20	5.16	N
C17	12.89	.22	6.44	12.71	.17	6.35	12.63	.32	6.31	12.65	.12	6.32	N
C19	37.07	.45	6.18	37.08	.46	6.18	35.80	.62	5.97	36.55	.39	6.09	N
C21	22.58	.33	5.65	22.69	.20	5.67	21.91	.40	5.48	22.86	.24	5.72	N
C23	60.47	.96	6.05	61.24	.70	6.12	57.40	.96	5.74	58.62	.67	5.86	2 vs. 4, 3
C25	56.18	.84	6.24	56.64	.42	6.29	54.63	.82	6.07	55.51	.50	6.17	N
C27	32.48	.48	5.41	31.58	.66	5.26	31.13	1.22	5.19	31.96	.42	5.33	N
C29	34.69	.80	5.78	34.45	.59	5.74	33.65	.78	5.61	34.72	.29	5.79	N
C31	17.05	.51	5.68	17.23	.59	5.74	15.93	1.19	5.31	17.27	.33	5.76	N
C33	23.79	.51	5.95	21.96	.80	5.49	23.02	1.16	5.76	23.35	.44	5.84	N
C35	30.40	.42	6.08	30.47	.34	6.09	30.00	.77	6.00	30.14	.38	6.03	N
C39	18.46	.31	6.15	18.27	.30	6.09	18.11	.52	6.04	17.93	.22	5.98	N
C41	19.36	.27	6.45	18.98	.12	6.33	18.50	.44	6.17	18.58	.20	6.19	N
C43	49.55	.70	6.19	48.92	.74	6.11	48.06	1.21	6.01	48.59	.51	6.07	N
C45	19.84	.15	6.61	19.78	.11	6.59	19.48	.33	6.49	19.42	.13	6.47	N
C47	42.16	.40	5.27	42.33	.36	5.29	41.10	.53	5.14	41.91	.36	5.24	N

a. See Footnote a, Table 29.
b. See Footnote b, Table 29.
c. Orientation categories: 1 = did not attend any orientation at all, 2 = did not attend in their country but did attend in the U.S., 3 = did attend in their country but did not attend in the U.S., 4 = did attend orientation both in their country and in the U.S.
d. See Footnote d, Table 29.

Table 37.
Satisfaction of Needs: Composite Means and Standard Errors by Orientation[a].

Composite Number[b]	Orientation Categories[c]: Category 1 Mean	SE	Item Avg.	Category 2 Mean	SE	Item Avg.	Category 3 Mean	SE	Item Avg.	Category 4 Mean	SE	Item Avg.	Significantly Different Categories[d]
C2	37.60	.88	5.37	37.93	.68	5.42	37.45	.70	5.35	37.86	.47	5.41	N
C4	40.91	1.06	5.11	39.41	1.19	4.93	38.18	1.07	4.77	40.08	.64	5.01	N
C6	13.78	.28	4.59	14.11	.31	4.70	13.06	.53	4.35	13.84	.19	4.61	N
C8	13.80	.32	4.60	14.38	.45	4.79	13.97	.62	4.66	14.23	.25	4.74	N
C10	17.90	.78	4.48	17.78	.76	4.45	18.91	.62	4.73	17.90	.33	4.48	N
C12	31.46	.98	4.49	31.47	1.30	4.50	31.92	1.20	4.56	31.41	.39	4.49	N
C14	11.98	.42	3.99	11.54	.54	3.85	11.05	.60	3.68	11.67	.14	3.89	N
C16	11.57	.25	3.86	11.23	.38	3.74	11.35	.42	3.78	11.02	.20	3.67	N
C18	7.41	.48	3.70	6.64	.31	3.32	7.03	.48	3.51	7.30	.19	3.65	N
C20	29.53	.62	4.92	28.88	.68	4.81	28.42	.73	4.74	28.35	.40	4.73	N
C22	16.66	.69	4.17	16.57	.49	4.14	17.60	.48	4.40	16.64	.20	4.16	N
C24	41.94	1.51	4.19	37.86	1.87	3.79	39.45	2.84	3.94	40.96	.81	4.10	N
C26	47.23	.80	5.25	45.71	.92	5.08	46.21	1.81	5.13	45.86	.66	5.10	N
C28	27.73	1.18	4.62	26.57	.75	4.43	27.83	1.71	4.64	25.91	.46	4.32	N
C30	27.28	.89	4.55	25.44	.64	4.24	25.37	1.43	4.23	25.78	.52	4.30	N
C32	14.96	.47	4.99	11.73	1.09	3.91	13.74	.76	4.58	13.47	.36	4.49	N
C34	19.59	.57	4.90	17.13	.79	4.28	19.03	.85	4.76	18.20	.44	4.55	N
C36	25.31	.54	5.06	24.45	.92	4.89	25.90	.77	5.18	24.76	.37	4.95	N
C40	12.03	.34	4.01	12.13	.48	4.04	12.63	.45	4.21	11.84	.28	3.95	N
C42	14.21	.55	4.74	13.23	.58	4.41	13.78	.57	4.59	13.78	.27	4.59	N
C44	34.46	.67	4.31	32.40	1.[illegible]	4.05	34.05	1.60	4.26	32.89	.35	4.11	N
C46	18.23	.48	6.08	17.73	.35	5.91	17.60	.46	5.87	17.70	.17	5.90	N
C48	36.24	1.35	4.53	35.79	.60	4.47	35.36	1.13	4.42	35.90	.41	4.49	N

a. See Footnote a, Table 29.
b. See Footnote b, Table 29.
c. Orientation categories: 1 = did not attend any orientation at all, 2 = did not attend in their country but did attend in the U.S., 3 = did attend in their country but did not attend in the U.S., 4 = did attend orientation both in their country and in the U.S.
d. See Footnote d, Table 29.

Operational measures for previous international experience were: 1) the total number of foreign countries visited besides the U.S., and 2) the total number of months spent in those countries. Most of the correlation coefficients between each of the above two measures of previous international experience and need composites were statistically significant. However, neither one of the measures explained 5% or more of variation in any need composite.

The highest three correlation coefficients of total number of foreign countries visited besides the U.S. were with the satisfaction scores of 1) needs regarding living in a U.S. community ($r = .11$), 2) needs for activities with U.S. nationals ($r = .10$), and the importance scores of 3) needs of the spouse ($r = .11$). The correlation coefficients of the total number of months spent in foreign countries besides the U.S. with need composites were, overall, very low. Only one coefficient exceeded — .10, which was the importance score of needs for foreign student life information with a negative correlation coefficient. The above results seem to point out that the more international experience one has, the more satisfied one is with needs pertaining to activities in the U.S. community. Also there is less need for finding relevant information, which one might already know or one might feel is unnecessary due to the fact that one might feel less "foreign" in a new environment because of previous international experience.

Hypothesis 26: Importance of needs varies by whether or not students have jobs waiting for them in home countries.

Hypothesis 27: Satisfaction of needs varies by whether or not students have jobs waiting for them in home countries.

Students' job prospects were measured by asking the question, "Are you trying to find a job in your country now?" The responses were recorded in four categories: 1) trying to find a job, 2) planning to find a job, 3) no plans made for finding a job, and 4) job waiting at home. We compared all the four categories even though, according to the above hypotheses, we expected differences to be found between the fourth category and the rest.

Among twenty-three importance composites, seven differed significantly among "job categories" as defined above. Students who had jobs waiting at home ranked highest in placing importance on six need composites. They scored highest for importance of university information and with those looking for jobs in home countries significantly higher than those without a plan made for finding a job in the home countries. Secondly, they scored significantly higher than those who made no plans for finding a job in the home countries in several importance scores, i.e., 1) needs for foreign student life information, 2) needs for extracurricular learning opportunities, and 3) needs for pre-return information. In addition, those with jobs waiting placed importance on needs for training to apply knowledge significantly higher than those in the first and third categories. On needs of the spouse, they also placed importance higher than those in the first category (See Table 38).

The importance score for the composite of needs for practical ex-

perience was significantly different among three categories of job prospects. Those who were not looking for a job but planned to do so and those who did not have plans to do so scored significantly higher than those with jobs waiting in home countries. This need composite was the second highest among all the importance scores and one of the least satisfied in the discussion of Hypothesis 1 (see page 67). A reaction to this fact might be that those students who did not plan to go home would place high importance on this composite, speculating a practical training opportunity might lead to a permanent job in this country. The difference among the categories of jobs indeed points toward this direction. However, when we controlled further for major fields of study, this difference between those with jobs and without jobs waiting in home countries with regard to needs for practical training revealed a somewhat different outlook. Among the agricultural majors, those students with jobs waiting at home were the second highest group in placing importance on these needs, following those who had no plan of job finding. Among students in engineering, the highest importance score went to those who were planning to find a job at home, followed by those who had no plan, then by those with jobs, and last by those who were currently looking for a job in home countries. Among the students in natural and life sciences, those with no plan to find a job in home countries had the lowest importance score on this composite, while the highest score was placed by those who were planning to look for a job in the home country, followed by those who already had a job waiting. Based on preliminary analysis, we contend that to associate this high importance placed on needs for practical experience with a hidden motive to remain permanently in the U.S. is premature. Depending upon major fields, it appears that needs for practical experience before returning home may be a real need, so that the returnees would be able to better apply what they learn through their practical experiences.

As to satisfaction of needs, again, those with jobs waiting in home countries led the high scores in ten composites, while no significant differences were found with regard to the remaining 13 composites. Those with jobs waiting were significantly more satisfied than the rest of the students in terms of following composites: 1) needs for relevancy of education, 2) needs for practical experiences,[11] 3) needs for pre-return information, and 4) anticipated post-return needs for material rewards which included job finding as one of the items in the composite. Students with jobs waiting in their home countries were also significantly more satisfied than those who had no plan of finding jobs in home countries, the least satisfied group in ranking, in terms of the following need composites: 1) needs for foreign student life information, 2) needs regarding academic relationship (also higher than those who were looking for a job in the home country), 3) needs for extracurricular learning opportunities, 4) needs for facilitating

[11] However, the average score for this composite among those with jobs barely exceeded the neutral point between dissatisfaction and satisfaction (4.03), while for the other categories of job prospects, the average scores were all in the range of dissatisfaction.

Table 38. Importance of Needs: Composite Means and Standard Errors by Finding Future Jobs in Home Country[a].

Composite Number[b]	Finding Future Job Categories[c]: Region 1 Mean	SE	Item Avg.	Region 2 Mean	SE	Item Avg.	Region 3 Mean	SE	Item Avg.	Region 4 Mean	SE	Item Avg.	Significantly Different Regions[d]
C1	41.15	.60	5.88	39.61	.47	5.66	38.79	.38	5.54	41.14	.54	5.88	1, 4 vs. 3
C3	46.00	.52	5.75	46.23	.29	5.78	45.96	.57	5.75	46.70	.54	5.84	N
C5	15.53	.28	5.18	15.51	.24	5.17	15.03	.24	5.01	16.14	.34	5.38	4 vs. 3
C7	16.89	.32	5.63	16.76	.28	5.59	16.45	.29	5.48	17.24	.20	5.75	N
C9	23.02	.37	5.76	23.13	.32	5.78	22.36	.30	5.59	23.16	.18	5.79	N
C11	42.08	.58	6.01	42.42	.64	6.06	41.19	.66	5.88	42.67	.48	6.10	N
C13	16.08	.35	5.36	15.57	.33	5.19	15.77	.37	5.26	16.45	.19	5.48	4 vs. 1, 3
C15	15.81	.38	5.27	15.70	.17	5.23	15.01	.25	5.00	16.25	.17	5.42	4 vs. 3
C17	12.46	.27	6.23	12.83	.13	6.41	12.97	.10	6.48	12.40	.09	6.20	3, 2 vs. 4
C19	36.36	.44	6.06	36.85	.43	6.14	36.16	.52	6.03	37.16	.31	6.19	N
C21	22.64	.41	5.66	23.20	.30	5.80	22.53	.29	5.63	22.61	.17	5.65	N
C23	57.18	1.00	5.72	59.56	1.02	5.96	60.34	.76	6.03	58.42	.87	5.84	N
C25	55.15	.82	6.13	56.29	.44	6.25	55.54	.51	6.17	56.17	.45	6.24	N
C27	31.05	.71	5.18	31.94	.36	5.32	32.20	.46	5.37	31.54	.40	5.26	N
C29	33.99	.81	5.67	34.91	.24	5.82	34.60	.38	5.77	34.62	.32	5.77	N
C31	15.67	.54	5.22	17.17	.46	5.72	16.75	.54	5.58	17.66	.25	5.89	4 vs. 1
C33	22.46	.94	5.62	23.29	.60	5.82	22.23	.65	5.56	23.59	.25	5.90	N
C35	30.14	.46	6.03	30.09	.42	6.02	30.16	.35	6.03	30.84	.25	6.17	N
C39	17.91	.35	5.97	18.11	.23	6.04	17.50	.35	5.83	18.68	.28	6.23	4 vs. 3
C41	19.01	.32	6.34	18.76	.34	6.25	19.05	.14	6.35	18.55	.18	6.18	N
C43	48.49	.97	6.06	48.69	.47	6.09	48.28	.56	6.03	49.61	.45	6.20	N
C45	19.37	.22	6.46	19.44	.23	6.48	19.66	.12	6.55	19.60	.13	6.53	N
C47	41.36	.89	5.17	41.91	.44	5.24	42.40	.37	5.30	41.76	.30	5.22	N

a. See Footnote a, Table 29.
b. See Footnote b, Table 29.
c. Finding future job categories. Responses to: "Are you trying to find a job in your country now?": 1 = Yes, I am. 2 = No, I am not, but I plan to do so. 3 = No, I am not, I have not made any plans about finding a job. 4 = No, I am not, because I have a job waiting for me.
d. See Footnote d, Table 29.

course work, and 5) needs regarding relationships with faculty and staff (also higher than those who were planning to look for a job in the home country). This category of students also expressed higher satisfaction with needs regarding living in a U.S. community than those who were looking for jobs in home countries, the least satisfied group in this regard. All in all, having jobs waiting at home appears to be an important predictor of satisfaction in various types of needs (See Table 39).

Hypothesis 28: Importance of needs varies by school size where students are enrolled.

Hypothesis 29: Satisfaction of needs varies by school size where students are enrolled.

Schools of students' current enrollment were measured by using six ranges with 10,000 interval. Correlation coefficients between school size and composites were mostly statistically significant. However, none accounted for 5% or more of variation in any composite. The three highest correlations were with three satisfaction scores of the following need composites: 1) needs for community information ($r = .15$), 2) needs for foreign student life information ($r = .13$), and 3) needs regarding university environment ($r = .15$). The above findings appear to indicate that the larger schools were providing the above types of information and the environment for study to a higher satisfaction of the students than were the smaller schools.

Hypothesis 30: Importance of needs varies by living arrangement of students.

Hypothesis 31: Satisfaction of needs varies by living arrangements of students.

Living arrangements of students were measured in two ways: 1) residence, and 2) with whom they lived. The first measure was categorized as dormitory, married student housing, and other (off-campus) for this analysis. The second measure was grouped as U.S. students, foreign students from another country, students from your country, your spouse, and alone. We did not include the category of U.S. family for the comparison due to the extremely small number of cases.

Hypothesis 30 was supported in terms of four importance composites by residence and also four importance composites by the second measure, "with whom they lived." As expected, those residing in dormitories placed significantly lower importance on needs of spouse and general family needs. Those in married student housing placed significantly lower importance on needs for practical experience than off-campus residents, and on needs for activities with U.S. nationals than the rest. We do not have an explanation for the former difference at this point, but the latter difference appears to reflect the fact that those who live in married housing tended to interact with their own spouses (and probably other couples) and placed less importance on interaction with U.S. nationals (See Table 40).

With regard to the second measure of living arrangements, Hypothesis 30 was supported in only two composites. Those living alone placed

Table 39. Satisfaction of Needs: Composite Means and Standard Errors by Finding Future Jobs in Home Country[a]

	Finding Future Job Categories[c]												
	Category 1			Category 2			Category 3			Category 4			
Composite Number[b]	Mean	SE	Item Avg.	Mean	SE	Item Avg.	Mean	SE	Item Avg.	Mean	SE	Item Avg.	Significantly Different Regions[d]
C2	36.59	1.10	5.23	37.59	.50	5.37	37.27	.56	5.32	38.77	.52	5.54	N
C4	38.79	1.21	4.85	39.99	.87	5.00	39.45	.97	4.93	40.63	.54	5.08	N
C6	13.38	.52	4.46	14.02	.21	4.67	13.25	.25	4.42	14.41	.39	4.80	4 vs. 3
C8	13.74	.48	4.58	13.95	.30	4.65	13.45	.49	4.48	15.01	.43	5.00	N
C10	17.39	.53	4.35	18.07	.39	4.52	16.78	.62	4.20	19.27	.42	4.82	4 vs. 1, 3
C12	29.03	.95	4.15	31.17	.75	4.45	30.11	.67	4.30	33.99	.78	4.86	4 vs. the rest
C14	11.20	.47	3.73	11.63	.31	3.88	11.05	.27	3.68	12.66	.30	4.22	N
C16	10.67	.59	3.56	11.54	.18	3.85	10.45	.28	3.48	11.79	.27	3.93	4 vs. 3
C18	6.79	.35	3.39	7.01	.18	3.51	6.72	.34	3.36	8.06	.30	4.03	4 vs. the rest
C20	27.63	.75	4.61	28.74	.53	4.79	28.03	.63	4.67	29.59	.53	4.93	N
C22	16.69	.60	4.17	16.59	.28	4.15	16.02	.55	4.01	17.25	.25	4.31	4 vs. 3
C24	38.89	1.83	3.89	39.18	1.14	3.92	40.35	1.61	4.03	42.44	1.26	4.24	N
C26	43.40	1.57	4.82	45.52	.61	5.06	45.72	.72	5.08	47.81	.66	5.31	4 vs. 1
C28	24.97	1.20	4.16	26.64	.51	4.44	26.58	.91	4.43	26.48	.53	4.41	N
C30	24.04	1.08	4.01	25.87	.49	4.31	26.57	.70	4.43	26.15	.65	4.36	N
C32	13.03	.74	4.34	13.22	.64	4.41	13.31	.53	4.44	13.31	.35	4.44	N
C34	18.96	.55	4.74	18.18	.62	4.54	17.37	.55	4.34	18.16	.39	4.54	N
C36	24.74	.75	4.95	24.40	.56	4.88	23.93	.53	4.79	26.68	.62	5.34	4 vs. 2, 3
C40	10.80	.40	3.60	11.91	.34	3.97	12.20	.29	4.07	12.32	.41	4.11	4 vs. the rest
C42	12.91	.48	4.30	13.52	.37	4.51	12.70	.35	4.23	15.41	.30	5.14	4 vs. the rest
C44	32.25	.85	4.03	33.56	.80	4.19	31.99	.69	4.00	34.14	.82	4.27	N
C46	17.43	.38	5.81	17.66	.30	5.89	17.69	.21	5.90	18.17	.21	6.06	N
C48	34.37	1.06	4.30	36.38	.45	4.55	35.01	.97	4.38	36.90	.36	4.61	N

a. See Footnote a, Table 29.
b. See Footnote b, Table 29.
c. Finding future job categories. Responses to: "Are you trying to find a job in your country now?": 1 = Yes, I am. 2 = No, I am not, but I plan to do so. 3 = No, I am not, I have not made any plans about finding a job. 4 = No, I am not, because I have a job waiting for me.
d. See Footnote d, Table 29.

significantly lower importance on needs for foreign student life information than students living with fellow countrymen and with students from other countries. Students living with U.S. students were also found to place significantly lower importance on the same needs than those who were living with fellow countrymen. Students living with U.S. students indeed placed significantly higher importance on needs for activities with U.S. nationals than the rest (See Table 41).

Hypothesis 31 was supported in terms of three composites for the first measure (residence) and ten composites for the second. Those residing in married student housing were found to be significantly more satisfied than those in dormitories with regard to needs for foreign student life information. They were also more satisfied than the residual category of students (living off-campus) with regard to housing needs. Those residing in a variety of off-caopus housing were found to be more satisfied than those in dormitories with regard to pre-return information needs. The latter finding might imply that those who resided off-campus tended to be those who had been in the community longer and that they knew more about this type of information (See Table 42).

Satisfaction of some needs was significantly dependent upon with whom students lived. Those residing with U.S. students turned out to be most satisfied with regard to seven need composites. They were significantly more satisfied than the rest, except those with spouses (with whom they did not differ significantly), with university information needs. They were more satisfied than those living with fellow countrymen or alone with regard to needs for community information. They, along with those living with spouses, were more satisfied than those living alone in terms of needs for foreign student life information and housing needs. These two categories of students were also more satisfied than those living with fellow countrymen with regard to needs for practical experiences. These students were more satisfied than the rest, except those living with students from other foreign countries, with regard to needs regarding living in a U.S. community and needs for activities with U.S. nationals. In other words, those living with U.S. students or with students from other foreign countries tended to have more satisfactory international living experiences than the other categories (See Table 43).

In addition, foreign students living with U.S. students perceived the likelihood of achieving both their primary and secondary goals significantly higher than those residing with fellow countrymen, which were lowest in likelihood scores. Those residing with students from other foreign countries also perceived significantly higher likelihood of achieving the primary goals than those living with fellow countrymen. However, it is important to note that all categories perceived very high likelihood of achieving the primary goals.

Hypothesis 32: Importance of needs varies by prestige accorded to one's country.

Hypothesis 33: Satisfaction of needs varies by prestige accorded to one's country.

Table 40. Importance of Needs: Composite Means and Standard Errors by Residence[a].

Composite Number[b]	Residence Categories[c]: Category 1 Mean	SE	Item Average	Category 2 Mean	SE	Item Average	Category 3 Mean	SE	Item Average	Significantly Different Categories[d]
C1	39.65	.75	5.66	40.66	.32	5.81	39.72	.39	5.67	N
C3	45.86	.45	5.73	45.91	.47	5.74	46.43	.35	5.80	N
C5	15.24	.18	5.08	15.85	.09	5.28	15.47	.16	5.16	N
C7	16.29	.24	5.43	16.48	.25	5.49	16.96	.15	5.65	N
C9	22.66	.26	5.67	22.61	.32	5.65	22.99	.18	5.75	N
C11	41.83	.57	5.98	42.10	.44	6.01	41.96	.30	5.99	N
C13	15.80	.45	5.27	15.84	.20	5.28	15.95	.12	5.32	N
C15	15.47	.50	5.16	15.43	.22	5.14	15.67	.13	5.22	N
C17	12.52	.26	6.26	12.39	.13	6.19	12.85	.08	6.43	3 vs. 2
C19	36.86	.47	6.14	35.91	.39	5.99	36.90	.29	6.15	N
C21	22.27	.42	5.57	22.50	.34	5.63	23.00	.18	5.75	N
C23	59.27	1.16	5.93	57.77	1.20	5.78	59.96	.61	6.00	N
C25	57.02	1.22	6.34	54.95	.64	6.11	55.91	.29	6.21	N
C27	33.52	.90	5.59	30.12	.60	5.02	32.06	.28	5.34	1, 3 vs. 2
C29	34.91	.74	5.82	34.76	.36	5.79	34.52	.25	5.75	N
C31	14.37	.68	4.79	17.33	.30	5.78	17.01	.36	5.67	2, 3, vs. 1
C33	17.91	.92	4.48	23.75	.44	5.94	23.09	.41	5.77	2, 3 vs. 1
C35	30.50	.22	6.10	30.18	.50	6.04	30.30	.22	6.06	N
C39	18.26	.32	6.09	18.20	.23	6.07	17.93	.19	5.98	N
C41	18.49	.16	6.16	19.00	.21	6.33	18.89	.11	6.30	N
C43	49.18	.73	6.15	49.23	.60	6.15	48.59	.35	6.07	N
C45	19.42	.20	6.47	19.45	.18	6.48	19.63	.08	6.54	N
C47	42.42	.73	5.30	41.31	.40	5.16	42.16	.25	5.27	N

a. See Footnote a, Table 29.

b. See Footnote b, Table 29.

c. Residence Categories, Recoded: 1 = Dormitory, 2 = Married Student Housing, 3 = Other (off campus).

d. See Footnote d, Table 29.

Table 41. Importance of Needs: Composite Means and Standard Errors by The Persons With Whom Students Lived[a].

	Categories of Persons With Whom Students Lived[c].															
	Category 1			Category 2			Category 3			Category 4			Category 5			
Composite Number[b].	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Significantly Different Categories[d].
C1	38.91	.75	5.56	38.05	.96	5.44	40.26	.74	5.75	40.21	.56	5.74	40.54	.49	5.79	N
C3	46.16	.73	5.77	44.87	1.27	5.61	47.54	.45	5.94	46.27	.40	5.78	45.89	.48	5.74	N
C5	15.12	.32	5.04	14.75	.56	4.92	16.21	.25	5.40	15.88	.23	5.29	14.96	.27	4.99	3 vs. 1, 5; 4 vs. 5
C7	16.89	.42	5.63	16.35	.52	5.45	16.66	.24	5.55	16.64	.17	5.53	16.89	.33	5.63	N
C9	22.64	.35	5.66	22.31	.56	5.58	23.16	.30	5.79	22.95	.21	5.74	22.81	.25	5.70	N
C11	41.68	.59	5.95	40.97	1.45	5.85	41.80	.43	5.97	42.35	.35	6.05	41.67	.81	5.95	N
C13	15.96	.38	5.32	16.01	.48	5.34	15.82	.25	5.27	16.07	.19	5.36	15.72	.44	5.24	N
C15	15.37	.40	5.12	15.19	.55	5.06	15.80	.28	5.27	15.69	.13	5.23	15.44	.44	5.15	N
C17	12.72	.16	6.36	13.06	.17	6.53.	12.70	.19	6.35	12.61	.10	6.30	12.73	.22	6.36	N
C19	36.28	.44	6.05	36.61	.63	6.10	36.48	.54	6.08	36.56	.27	6.09	36.86	.64	6.14	N
C21	21.90	.51	5.47	22.69	.50	5.67	22.94	.43	5.74	22.81	.20	5.70	22.81	.41	5.70	N
C23	59.39	.93	5.94	57.59	1.42	5.76	58.10	1.33	5.81	59.25	.78	5.92	59.60	.80	5.96	N
C25	57.86	1.23	6.43	54.00	1.32	6.00	56.08	.75	6.23	55.31	.37	6.15	56.15	.97	6.24	N
C27	34.73	.66	5.79	37.15	.86	5.19	32.49	.47	5.42	30.62	.57	5.10	31.66	.72	5.28	1 vs. the rest
C29	35.58	.53	5.93	34.35	.87	5.73	34.65	.61	5.77	34.60	.22	5.77	34.81	.47	5.80	N
C31[e].	—	—	—	—	—	—	—	—	—	17.47	.22	5.82	—	—	—	—
C33[e].	—	—	—	—	—	—	—	—	—	23.68	.25	5.92	—	—	—	—
C35	30.40	.40	6.08	30.84	.64	6.17	29.94	.36	5.99	30.42	.34	6.08	30.13	.56	6.03	N
C39	18.28	.41	6.09	18.25	.35	6.08	17.78	.24	5.93	18.20	.22	6.07	18.16	.17	6.05	N
C41	18.50	.25	6.17	19.16	.32	6.39	18.56	.31	6.19	19.02	.16	6.34	18.92	.18	6.31	N
C43	48.46	.63	6.06	48.54	.59	6.19	48.44	.60	6.06	49.24	.45	6.16	48.68	.80	6.08	N
C45	19.41	.22	6.47	19.46	.33	6.49	19.29	.27	6.43	19.56	.14	6.52	19.77	.24	6.59	N
C47	42.56	.49	5.32	42.10	.43	5.26	41.82	.62	5.23	42.04	.41	5.25	41.71	.62	5.21	N

a, b, and d. See Footnotes a, b, and d in Table 29.

c. Categories: 1 = U.S. students, 2 = Foreign students from another country, 3 = Students from your country, 4 = Your spouse (and children), 5 = Alone. We did not include the category, U.S. family, for the comparisons due to the extremely small size.

e. Applicable only to Category 4.

Table 42. Satisfaction of Needs: Composite Means and Standard Errors by Residence[a].

Composite Number[b]	Residence Categories[c]: Category 1 Mean	SE	Item Average	Category 2 Mean	SE	Item Average	Category 3 Mean	SE	Item Average	Significantly Different Categories[d]
C2	37.64	.68	5.38	38.32	.44	5.47	37.42	.68	5.35	N
C4	39.76	.86	4.97	40.10	.54	5.01	39.60	1.00	4.95	N
C6	12.91	.35	4.30	14.13	.30	4.71	13.80	.19	4.60	2 vs. 1
C8	13.53	.48	4.51	14.65	.25	4.88	13.91	.28	4.64	N
C10	17.37	.72	4.34	17.74	.28	4.44	17.85	.70	4.46	N
C12	30.34	.91	4.33	32.92	.61	4.70	30.76	.83	4.39	N
C14	11.43	.39	3.81	12.33	.23	4.11	11.42	.30	3.81	N
C16	10.66	.45	3.55	11.51	.29	3.84	11.13	.21	3.71	N
C18	6.97	.30	3.48	7.77	.21	3.89	6.90	.32	3.45	N
C20	27.63	1.58	4.61	29.00	.47	4.83	28.50	.59	4.75	N
C22	16.27	.77	4.07	17.16	.21	4.29	16.35	.43	4.09	N
C24	40.01	4.43	4.00	41.82	.95	4.18	39.95	.69	3.99	N
C26	45.33	.75	5.04	46.24	.43	5.14	45.88	.76	5.10	N
C28	25.94	1.18	4.32	25.43	.68	4.24	26.75	.71	4.46	N
C30	25.95	.58	4.32	28.05	.62	4.68	25.16	.47	4.19	2 vs. 3
C32	12.75	.41	4.25	13.53	.47	4.51	12.49	.51	4.16	N
C34	16.11	.71	4.03	18.04	.44	4.51	17.87	.54	4.47	N
C36	24.26	.59	4.85	25.59	.47	5.12	24.57	.76	4.91	N
C40	11.31	.26	3.77	11.86	.48	3.95	12.12	.18	4.04	3 vs. 1
C42	13.67	.34	4.56	14.10	.30	4.70	13.49	.38	4.50	N
C44	31.01	1.64	3.88	33.44	.62	4.18	33.23	.58	4.15	N
C46	17.66	.21	5.89	18.23	.26	6.08	17.60	.27	5.87	N
C48	35.60	.70	4.45	36.98	.43	4.62	35.27	.89	4.41	N

a. See Footnote a, Table 29.

b. See Footnote b, Table 29.

c. Residence Categories, Recoded: 1 = Dormitory, 2 = Married Student Housing, 3 = Other (off-campus).

d. See Footnote d, Table 29.

Table 43. Satisfaction of Needs: Composite Means and Standard Errors by The Persons With Whom Students Lived[a].

	Categories of Persons With Whom Students Lived[c].															
	Category 1			Category 2			Category 3			Category 4			Category 5			
Composite Number[b].	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Mean	SE	Item Average	Significantly Different Categories[d].
C2	39.96	.66	5.71	36.79	1.02	5.26	36.82	1.00	5.26	38.30	.46	5.47	36.60	.67	5.23	1 vs. 2, 3, 5
C4	42.96	1.11	5.37	39.87	1.39	4.98	38.81	1.06	4.85	40.58	.96	5.07	37.79	.73	4.72	1 vs. 3, 5
C6	13.90	.36	4.63	13.58	.57	4.53	13.53	.33	4.51	14.37	.25	4.79	12.76	.21	4.25	4, 1 vs. 5
C8	13.81	.51	4.60	13.53	.37	4.51	13.76	.37	4.59	14.64	.28	4.88	14.09	.37	4.70	N
C10	18.52	.51	4.63	18.18	.75	4.55	17.01	.63	4.25	17.85	.71	4.46	17.66	.41	4.42	N
C12	32.54	.75	4.65	29.20	1.12	4.17	30.51	.70	4.36	32.07	1.16	4.58	30.71	.90	4.39	N
C14	12.51	.29	4.17	10.74	.63	3.58	11.55	.24	3.85	12.04	.47	4.01	11.02	.55	3.67	N
C16	11.20	.27	3.73	11.23	.47	3.74	10.87	.25	3.62	11.45	.34	3.82	10.97	.45	3.66	N
C18	7.29	.34	3.64	6.55	.51	3.27	6.19	.22	3.09	7.73	.40	3.86	7.00	.34	3.50	N
C20	28.60	1.41	4.77	29.52	.68	4.92	27.51	.59	4.58	29.41	.57	4.90	27.73	.77	4.62	N
C22	17.62	.58	4.40	16.98	.68	4.24	16.10	.31	4.03	16.90	.50	4.22	16.04	.41	4.01	N
C24	39.98	2.06	4.00	41.14	2.19	4.11	41.74	1.22	4.17	41.35	.84	4.14	37.71	1.82	3.77	N
C26	48.68	.68	5.41	47.58	1.49	5.29	44.84	1.13	4.98	46.43	.60	5.16	43.78	.73	4.86	1 vs. 4, 3, 5
C28	30.44	1.12	5.07	27.84	1.28	4.64	24.90	1.13	4.15	26.18	.86	4.36	25.05	.66	4.18	1 vs. 4, 5, 3
C30	27.14	1.01	4.52	25.25	1.02	4.21	24.98	.69	4.16	27.07	.60	4.51	23.91	.69	3.99	1, 4 vs. 5
C32[e].	—	—	—	—	—	—	—	—	—	18.07	.43	4.36	—	—	—	—
C34[e].	—	—	—	—	—	—	—	—	—	18.03	.36	4.51	—	—	—	—
C36	25.35	.72	5.07	23.64	.48	5.13	23.86	.50	4.77	25.43	.68	5.09	24.17	.67	4.83	4 vs. 5
C40	11.96	.36	3.99	11.90	.55	3.97	11.83	.35	3.94	12.37	.24	4.12	11.45	.43	3.82	N
C42	14.44	.38	4.81	13.13	.52	4.38	13.65	.33	4.55	13.69	.47	4.56	13.62	.27	4.54	N
C44	34.25	1.85	4.28	31.05	1.14	3.88	33.06	.64	4.13	33.40	.95	4.17	32.29	1.01	4.04	N
C46	18.23	.31	6.08	18.20	.30	6.07	17.03	.32	5.68	18.01	.26	6.00	17.61	.26	5.87	1, 2 vs. 3
C48	37.80	.73	4.73	36.35	.73	4.54	34.54	.75	4.32	36.54	.61	4.57	34.39	1.23	4.30	1 vs. 3

a, b, and d. See Footnotes a, b, and d in Table 29.

c. Categories: 1 = U.S. students, 2 = Foreign students from another country, 3 = Students from your country, 4 = Your spouse (and children), 5 = Alone. We did not include the category, U.S. family, for the comparisons due to the extremely small size.

e. Applicable only to Category 4.

Prestige accorded was measured by students' perceptions as to how U.S. students would rate their home countries in terms of prestige in the world. We contend the prestige which would influence one's needs is the subjective observation accorded to one's own country rather than some sort of objective measure of prestige. We considered foreign students' perception of what U.S. students thought of their countries would be most relevant and would possibly have some impact on their needs and satisfaction while they were in this country.

Most of these correlation coefficients were statistically significant. However, none accounted for 5% or more of variation in importance or satisfaction scores of needs. The three highest correlation coefficients of the country's prestige measure were with the satisfaction scores of anticipated post-return needs both for material rewards ($r = .20$) and for professional opportunities and facilities ($r = .21$), and the perceived likelihood score of achieving secondary goals ($r = .19$). In other words, those who perceived their countries were held higher in prestige by U.S. students tended to be those who anticipated higher satisfaction with post-return needs than those who perceived their countries to be held lower in prestige. The former also perceived higher likelihood of achieving secondary goals for obtaining a broader experience in the U.S.[34]

Linguistic Needs

Linguistic needs were measured by two composites: 1) importance of English language skills and 2) self-evaluation of those skills. In addition, we included a composite to measure evaluation of English remedial courses to improve English proficiency.

Composites of English language skills were analyzed in terms of the following variables: sponsorship categories, age, sex, graduate vs. undergraduate status, fields of study, length of stay in the U.S. and at the school, regions of the world, school size, and living arrangements. As far as linguistic needs were concerned, we limited our hypothesis testing to these independent variables.

With regard to perceived importance of English skills, the only significant difference was found in terms of sex categories; female students placed higher importance than male students on the English skill composite (See Table 45).

[34] We also included a measure of self image with regard to one's academic performance. Students were asked to rate their academic performance according to how they thought U.S. students would rate it. Most of these correlation coefficients were statistically significant. In terms of importance, this self image measure did not account for substantial variation of any need composites. In terms of satisfaction, however, there are several correlation coefficients accounting for more than 5% and up to 10% of variation in certain need composites. They were the correlation coefficients with satisfaction scores of needs regarding university environment, needs for facilitating coursework, needs regarding relationships with faculty and staff, and perceived likelihood of primary and secondary goals. Expectedly, the higher the self image perceived the more satisfied students were in the above needs which were mostly involving interpersonal relationships, particularly with U.S. faculty and staff.

Table 44:
Importance and Self Evaluation of English Language Skills and Evaluation of Remedial English Courses to Improve the Skills: Composite Means and Standard Errors by Sponsorship Categories

English Language Skill Composites[a.]	Sponsorship Categories[b.] Sponsor 1 Mean	SE	Item Average	Sponsor 2 Mean	SE	Item Average	Sponsor 3 Mean	SE	Item Average	Sponsor 4 Mean	SE	Item Average	Significantly Different Categories[c.]
Importance of English Skills[d.]	50.68	1.18	6.33	51.39	.43	6.42	51.84	.37	6.48	50.82	.56	6.35	None
Self Evaluation of English Skills[e.]	43.54	1.28	5.44	45.84	.53	5.73	44.91	.35	5.61	42.89	.94	5.36	2 vs. 4
Evaluation of Remedial English Courses to Improve the Skills[f.]	42.02	2.32	5.25	42.82	1.51	5.35	39.51	2.26	4.94	39.91	1.65	4.99	None

a. Composites include items 509-530 in the Questionnaire, Appendix B.
b. See footnote b on Table 25.
c. See footnote c on Table 27.
d. Items scores: 1 = very unimportant, . . ., 7 = very important.
e. Item scores: 1 = very poor, . . ., 7 = very good.
f. Item scores: 1 = very poorly, . . ., 7 = very well.
Esti.nated 40.3% of the population did not take any remedial courses.

As to the self-evaluation of English skills, sex categories, undergraduate vs. graduate status, and fields of study did not show significant differences (See Tables 45 and 46). In terms of sponsorship categories, home government supported students ranked highest in self evaluation of the skills and significantly higher than self or privately supported students, who were the lowest ranked (See Table 44). In terms of regions of the world, African students rated themselves significantly higher than the rest, with Latin American students being second, South and East Asia third, and Southwest Asian students fourth, even though the difference between the third and the fourth was not significant. European students were excluded from this comparison due to their relatively small size (See Table 46). In terms of living arrangements, those in married student housing rated themselves higher than those in dormitories, with off-campus students ranking in the middle and not significantly different from either categories. Students living with U.S. students ranked highest and rated themselves

Table 45.
Importance and Self Evaluation of English Language Skills and Evaluation of Remedial English Courses to Improve the Skills: Composite Means and Standard Errors by (A) Sex and by (B) Classification.

	(A) Sex Categories						
	Female			Male			Significantly
English Language Skill Composites[a]	Mean	SE	Item Average	Mean	Item SE	Average	Different Categories
Importance of English Skills[d]	52.70	.33	6.59	50.60	.64	6.33	f vs. m
Self Evaluation of English Skills[e]	42.88	.81	5.36	44.69	.58	5.59	N
Evaluation of Remedial English Courses to Improve the Skills[f]	39.49	1.55	4.94	41.09	1.14	5.14	N

	Undergraduate			Graduate			Significantly
English Language Skill Composites[a]	Mean	Item SE	Item Average	Mean	SE	Average	Different Categories
Importance of English Skills[d]	51.46	.45	6.43	51.03	.78	6.38	N
Self Evaluation of English Skills[e]	43.93	.73	5.49	44.57	.41	5.57	N
Evaluation of Remedial English Courses to Improve the Skills[f]	40.93	1.08	5.12	41.07	1.26	5.13	N

a, c-f. See Footnotes a, c-f on Table 44.

Table 46.
Importance of Self-Evaluation of English Language Skills and Evaluation of Remedial English Courses to Improve the Skills: Composite Means and Standard Errors of Means by (A) Fields of Study and (B) Regions of the World.

(A) Fields of Study[b.]

English Language Skill Composites[a.]	Category 1 Mean	Category 1 Item SE	Category 1 Item Avg.	Category 2 Mean	Category 2 Item SE	Category 2 Item Avg.	Category 3 Mean	Category 3 Item SE	Category 3 Item Avg.	Category 4 Mean	Category 4 Item SE	Category 4 Item Avg.	Category 5 Mean	Category 5 Item SE	Category 5 Item Avg.	Significantly Different Categories[c.]
Importance of English Skills[d.]	51.17	.21	6.40	52.09	.82	6.51	51.66	.99	6.46	49.23	2.22	6.15	51.25	.46	6.41	N
Self Evaluation of English Skills[e.]	43.98	.53	5.50	45.60	.87	5.70	42.78	1.24	5.35	44.95	1.15	5.62	44.28	.80	5.53	N
Evaluation of Remedial English Courses to Improve the Skills[f.]	38.44	1.76	4.81	40.35	1.74	5.04	41.39	2.50	5.17	42.38	3.17	5.30	41.50	1.21	5.19	N

(B) Regions of the World[g.]

English Language Skill Composites[a.]	Region 1 Mean	Region 1 Item SE	Region 1 Item Avg.	Region 2 Mean	Region 2 Item SE	Region 2 Item Avg.	Region 3 Mean	Region 3 Item SE	Region 3 Item Avg.	Region 4 Mean	Region 4 Item SE	Region 4 Item Avg.	Significantly Different Categories[c.]
Importance of English Skills[d.]	50.23	1.46	6.28	50.92	.49	6.36	51.75	.50	6.47	51.49	.44	6.49	N
Self Evaluation of English Skills[e.]	48.77	.56	6.10	42.26	.49	5.28	42.17	.99	5.27	46.29	.64	5.79	1 vs. 4 vs. 2, 3
Evaluation of Remedial English Courses to Improve the Skills[f.]	45.66	.81	5.71	40.50	1.54	5.06	34.89	1.94	4.36	43.41	1.56	5.43	1 vs. 2, 3; 4 vs. 3

a, c-f. See Footnotes a, c-f on Table 44.

b. Fields of Study: 1 = Engineering, 2 = Agriculture, 3 = Natural and Life Sciences, 4 = Social Sciences, 5 = Other.

g. Regions: 1 = Africa, 2 = South and East Asia, 3 = Southwest Asia, 4 = Latin America, Europe was excluded due to its small size.

significantly higher than those residing with fellow countrymen, the lowest ranked (See Table 47).

Those who had taken any English remedial courses were asked to evaluate those courses as to how well they helped to improve the skills. Sex, undergraduate vs. graduate status, fields of study, and living arrangements did not make significant differences in this evaluation. As to the regions of the world, students from Latin America rated those courses highest and gave a significantly higher rating than those from Southwest Asia who gave the lowest rating. Due to a lack of data we cannot speculate about this rating. However, it is the impression of one of the authors that there has been more linguistic work done with regard to teaching English as a foreign language to Spanish and Portuguese speaking groups than any other groups. To some extent, the above result might be reflecting this fact.

In terms of age, even though all the correlation coefficients were statistically significant, none exceeded r values of .10. As to the length of stay in the U.S. and the school (the total months), all coefficients were significant but only the ones of self evaluation of skills was positively correlated with total months of stay in any substantive magnitude (r values over .10). However, neither one of the two correlations accounted for 5% or more of variation in self-evaluation of the skills. School size was correlated significantly only with importance and self-evaluation scores of the skills. (Its correlation with students' evaluation of remedial courses was not significant.) Yet, none of the correlation coefficients were substantial (all less than .10).

Conclusions

In every category of needs, there were needs which were not satisfied to the level of students' expectations, even though most of the needs were satisfied to a certain extent rather than unsatisfied. Needs for practical experience and anticipated post-return needs were among the least met and the most problematic ones for educational institutions to accommodate. Financial needs and pre-return information needs were also least met to their expectations. However, meeting these needs was considered to be less problematic. Among all the categories of needs, informational needs were best met. Students were also quite satisfied with the likelihood they perceived of achieving their primary educational goals which they regarded with the highest importance. Students varied most by regions of the world from which they came and second by the major field categories with regard to importance they placed on various needs. Sponsorship categories, undergraduate vs. graduate status distinctions and job prospects were the next significant characteristics to account for variation in importance of needs. With regard to satisfaction of needs, again, regions of the world turned out to be the most significant predictor of satisfaction with many needs, followed by self-evaluated command of English, whether or not living with U.S. students, and job prospects in their home countries.

Table 47.
Importance of Self-Evaluation of English Language Skills and Evaluation of Remedial English Courses to Improve the Skills: Composite Means and Standard Errors of Means by (A) Residence and (B) With Whom Students Lived.

(A) Residence Categories[b.]

English Language Skill Composites[a.]	Category 1 Mean	Category 1 SE	Category 1 Item Average	Category 2 Mean	Category 2 SE	Category 2 Item Average	Category 3 Mean	Category 3 SE	Category 3 Item Average	Significantly Different Categories[c.]
Importance of English Skills[d.]	52.07	.44	6.51	51.38	.60	6.42	50.92	.61	6.36	N
Self Evaluation of English Skills[e.]	42.33	.62	5.29	45.39	.57	5.67	44.15	.65	5.52	2 vs. 1
Evaluation of Remedial English Courses to Improve the Skills[f.]	39.01	2.97	4.88	41.08	1.89	5.14	40.91	1.19	5.11	N

(B) With Whom Students Lived[g.]

English Language Skill Composites[a.]	Category 1 Mean	Category 1 SE	Category 1 Item Avg.	Category 2 Mean	Category 2 SE	Category 2 Item Avg.	Category 3 Mean	Category 3 SE	Category 3 Item Avg.	Category 4 Mean	Category 4 SE	Category 4 Item Avg.	Category 5 Mean	Category 5 SE	Category 5 Item Avg.	Significantly Different Categories[c.]
Importance of English Skills[d.]	51.69	.62	6.46	52.65	.61	6.58	50.95	.56	6.37	50.90	.89	6.36	51.53	.69	6.44	N
Self Evaluation of English Skills[e.]	46.27	.73	5.78	43.99	1.44	5.50	42.30	.77	5.29	44.79	.76	5.60	43.78	.89	5.47	1 vs. 3
Evaluation of Remedial English Courses to Improve the Skills[f.]	43.48	2.22	5.43	41.39	2.61	5.17	39.29	1.29	4.91	41.37	1.75	5.17	39.10	2.58	4.89	N

a, c-f. See Footnotes on Table 44.

b. Categories: 1 = Dormitory, 2 = Married Student Housing, 3 = Other (Off-Campus)

g. Categories: 1 = U.S. students, 2 = Foreign students from other countries, 3 = Students from one's own country, 4 = Your spouse (and children), 5 = Alone. We did not include the category, U.S. family, for this comparison due to its relatively small size.

Cross-Tabulations of Personal Characteristics

In this section, we present cross-tabulations of selected personal characteristics with (1) sponsorship categories, (2) regions of the world, (3) fields of study, and (4) sex categories of students. The figures in this table are population estimates with use of weights; therefore, only percentages are presented. (Weighted frequencies might be misleading.) Brief comments on the tables are given below.

Tables 48 through 64 present crosstables of selected characteristics by sponsorship categories. On TOEFL, for example, nearly 64% of A.I.D. students and 52% of students sponsored by home governments scored over 500, whereas among the other scholarship and assistantship students, 75% scored over 500. Fairly high proportions of students supported by A.I.D., home governments, and self or private sources did not take TOEFL examinations (23.6%, 27.5% and 32.7% respectively), while 15% of students on other scholarships and assistantships did not. (See Table 48.)

Table 49 gives us the comparison of sponsorship categories and living arrangements. For A.I.D. students, a majority of them were either living alone (25.6%) or with their spouse (25.3%), while the other three categories of students lived more with their spouses than alone. More A.I.D. students resided with U.S. families and students from other countries than did the other three sponsorship categories of students. Yet, for all four categories, the top three living arrangements were (1) with spouse, (2) alone, and (3) with student(s) from one's own country.

Table 50 presents another measure of living arrangements tabulated by sponsorship categories. For all the categories, the highest proportion lived in apartments. For grade point average (Table 51), all four categories had the majority of students in the highest range, 3.25 - 4.00 average, students on scholarships and assistantships reporting the largest number (89.5%) in this category. As to sex categories of students (Table 52), for all four categories, students were predominantly males. Proportionally more male students were found among A.I.D. and home government sponsored categories than the other two sponsors.

Table 53 shows a striking difference in job prospects by sponsorship categories. Over 50% of students sponsored by either A.I.D. or home government had a job waiting for them in their home countries, while less than one-fifth of scholarships and assistantships students and only 11% of private self-supported students had a job waiting for them. On the other hand, about 45% of self or privately supported students had neither a job waiting nor a plan to look for one in their home countries. These responses were least frequent among home government supported students (10.3%).

Table 54 illustrates the relationship between sponsorship and participation in orientation programs. A.I.D. sponsored students showed the highest attendance both in home countries and in the U.S. However, we noted that even in this category 29% of the students did not attend any predeparture orientation programs in their home countries. The least attendance at orientation programs was noted among self or privately supported students both in home countries and in the U.S.

Tables 55 and 56 present data on return intention of students by sponsorship categories. Again, a striking difference is noted among sponsorship categories in this area. About one half of both A.I.D. sponsored and home government sponsored students responded they would definitely not remain in the U.S., while the proportion for the other two categories dropped drastically to near one-fifth. For the hypothetical question as to the possible reasons for remaining in the U.S. permanently (Table 56), the most frequently mentioned reason was political conflict at home among A.I.D., home government, and self or privately supported students. Students holding scholarships or assistantships most frequently responded that a good job offer in the U.S. would be a possible reason for remaining permanently.

Table 57 presents sponsorship categories by fields of study. The students appear to be well distributed with 28.2% being the highest concentration in one area (engineering scholarship and assistantship students). A.I.D. and home government sponsored students showed higher concentration in agriculture in contrast to the other two categories of students. For all four categories, engineering encompassed the most students; except among self or privately supported students, business and management had an equal concentration of students.

In comparing regions of origin with sponsorship categories (Table 58), we notice that nearly 70% of the scholarship and assistantship students were from South and East Asia while for home government sponsored, 65% came from Africa and Latin America. Figures show that a large majority of self or privately supported students came from all parts of Asia (70%). Marital status and classification was also compared with sponsorship categories (Tables 59 and 60). The majority of students tend to be single among those supported by A.I.D., scholarships and assistantships, and self or private sources. The government category was the only exception with the majority of students indicating that they were married (54.1%).

Among those who were married, A.I.D. students were more likely to leave spouses at home, while the other students were much more likely to have their spouses with them. For all the categories except scholarships and assistantships, master's students were most numerous. Among A.I.D. sponsored students, they amounted to more than half of this category. On the other hand, the category of scholarships and assistantships was, by virtue of its category definition, predominantly Ph.D. students, since assistantships tend to be awarded to Ph.D. candidates.

Table 61 presents cross-tabulation of secondary sources of support by primary sources of support.

In addition to cross-tabulations, we conducted comparisons of sponsorship categories with regard to their views of barriers in establishing good relationship with U.S. nationals (Table 62), their perception of self and prestige of their home country (Table 63), and some demographic characteristics (Table 64). Briefly, as to their perceptions of barriers, the four sponsorship categories were most similar except in two factors: political view and the student's attitude toward others. A.I.D. sponsored

students did not differ from other categories in their perception of any one of the listed barriers. As to one's academic performance and intelligence as rated by oneself, perceived rating by friends in one's home country, and perceived rating by U.S. students, students on scholarships and assistantships consistently achieved higher ratings than other categories of students. We attribute this significant difference to the advantageous position of the latter, in being accepted in the system by virtue of being assistants. Overall, they indicated they had much better images of themselves with regard to academic performance and intelligence. On the other hand, the four categories were not significantly different regarding their rating of physical appearances. As to the rating of prestige of one's country, A.I.D. sponsored students showed significantly lower ratings than other categories in terms of their perception of rating by friends at home and rating by U.S. students. At this point we are unable to speculate about these differences.

Tables 65 and 66 present cross-tabulations of marital status and fields of study by regions of origin. For Africa and Latin America, there was an approximately equal distribution of married and single students. However, for South and East Asia, Southwest Asia, and Europe, more students tended to be single rather than married. For Africa, 11% of the students had spouses still in their home country while less than 5% of all other regions indicated this situation. Fairly even distribution of fields of study was noted by regions except for Southwest Asia where 35.5% of these students are in engineering.

Tables 67 through 71 present cross-tabulations of selected characteristics by fields of study. In Table 67 some variation in return intention exists by fields of study. Students in education indicated the highest intention of not remaining in the U.S. permanently (52.9%), while those in business and management had the lowest percentage (16.9%). As to the possible reasons for remaining in the U.S., for every field listed, the top two reasons were political conflict at home and a good job offer in the U.S., except for students in humanities where marriage to a U.S. citizen was the most mentioned reason. For all the fields listed, except engineering and business and management, one-third to one-half of the students indicated nothing would make them stay permanently in the U.S. (Table 68). As to TOEFL score ranges (Table 69), most fields showed similar distributions, concentrating in the top three categories, i.e., scores over 500. Humanities had a rather different distribution including its 44% for not taking the exam at all. Table 70 presents job situations. Agriculture had the highest proportion of students (over one half) with jobs waiting for them, followed by education (42.9%). On the other hand, engineering had the highest proportion of students, nearly 40%, who had no plans to look for jobs in home countries, followed by those in health professions (38%).

In engineering, agriculture, natural and life sciences, business and management, health professions and others, the majority of students were single (Table 71), whereas in education, humanities, and social sciences, the majority of students were married.

Tables 72 through 74 present a number of personal characteristics cross-tabulated by sex categories. The highest percentage of males was in engineering (29.9%) while the highest percentage of females was found in others (Table 72). The highest percentage of both males and females was at the master's level (31.4% and 36.3% respectively). However, 30.3% of the males were at the Ph.D. level, while only 19.0% of females at this level (Table 72).

As to the regions of the world, a large share of female students was from South and East Asia (45.7%), while 35.4% of males came from the same region (Table 73). The majority of students, both female and male, was single, 60.1% and 54.1% respectively. As to the types of residence, the largest portion of both male and female students was residing in an apartment (45.9% and 44.9% respectively). The largest percentage of both male and female students lived with their spouses (and children) (37.8% and 35.3% respectively) (Table 74).

Table 75 presents selected characteristics of the sample; i.e. without weights.

Table 48.
TOEFL Scores by Sponsorship Categories (Percent Distribution[a.])

TOEFL Score Ranges	Sponsorship Categories[b.] A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Never taken TOEFL	23.6	27.5	15.0	32.7
Below 400	1.1	0.2	0.4	0.2
400-450	1.9	5.7	1.4	4.8
451-500	9.8	14.7	8.0	12.1
501-550	22.9	25.8	24.1	24.3
551-600	31.3	16.2	23.7	15.4
Over 600	9.4	9.9	27.4	10.5
Total	100.0	100.0	100.0	100.0

a. Percentages are population estimates computed with weights. Therefore, actual frequency is not reported.

b. Primary sources of support.

Table 49.
Living Arrangements by Sponsorship Categories
(Percent Distribution[a].)

With Whom Do You Live?	Sponsorship Categories[b]. A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
U.S. Family	6.3	0.4	1.2	2.5
U.S. Student(s)	9.6	5.7	8.7	11.7
Foreign Student(s) from another Country	14.7	3.2	7.5	4.8
Student(s) from your Country	16.3	17.0	14.6	18.5
Your Spouse (and children)	25.3	51.7	41.5	30.7
Alone	25.6	20.4	23.6	17.9
Other	2.2	1.6	2.9	13.9
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.
b. Primary sources of support.
c. A mixture of friends and relatives.

Table 50.
Type of Residence by Sponsorship Categories
(Percent Distribution[a].)

Residence	Sponsorship Categories[b]. A.I.D	Home Government	Scholarships & Assistantships	Self or Private Sources
Dormitory	16.9	6.7	16.0	10.8
Married Student Housing	17.7	37.3	31.1	10.9
Room off Campus without Cooking	2.2	1.0	1.6	1.4
Room off Campus with Cooking	17.5	6.5	10.6	8.9
Apartment	39.3	44.4	35.1	53.0
Trailer	1.5	1.1	0.6	0.9
Other[c]	4.9	3.0	5.0	14.1
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.
b. Primary sources of support.
c. Included were my own housing and on-campus apartments.

Table 51.
Grade Point Average by Sponsorship Categories
(Percent Distribution[a].)

Grade Point Average	Sponsorship Categories[b]. A.I.D	Home Government	Scholarships & Assistantships	Self or Private Sources
0.00-2.44	0.3	6.0	0.5	4.9
2.45-2.84	21.4	13.3	0.8	16.6
2.85-3.24	29.4	23.2	9.2	33.2
3.25-4.00	48.9	57.5	89.5	45.3
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.
b. Primary sources of support.

Table 52.
Sex of Sponsorship Categories
(Percent Distribution[a].)

Sex	Sponsorship Categories[b]. A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Female	19.1	17.0	26.9	29.4
Male	80.9	83.0	73.1	70.6
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.
b. Primary sources of support.

Table 53.
Finding Future Jobs by Sponsorship Categories
(Percent Distribution[a].)

Are You Trying To Find a Job In Your Country Now?	Sponsorship Categories[b]. A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Yes, I Am	8.1	11.9	10.2	13.3
No, but Plan to Do So	12.7	21.1	37.1	30.5
No, and no Plans to Do So	23.8	10.3	36.4	45.2
No, because Job is Waiting	55.4	56.7	16.3	11.0
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.
b. Primary sources of support.

Table 54.
Participation in Orientation Programs by Sponsorship Categories (Percentages[a] of Students in each Sponsorship Category who Participated in each Orientation Program)

Who Organized the Orientation Program(s) You Attended?	Sponsorship Categories[b]: A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
In Home Country:				
Orientation by Home Government	22.8	35.8	24.5	19.7
Orientation by Sponsor Agency	20.9	10.1	8.0	4.9
Orientation by Others	4.4	3.3	4.0	3.7
Did Not Attend	29.0	29.6	36.3	41.0
In the U.S.:				
Orientation by Sponsor Agency	29.3	7.7	2.9	2.5
Orientation by University of Current Enrollment	40.0	51.1	60.3	45.8
Orientation by Another University	9.0	8.2	5.2	6.4
Orientation by Others	2.6	0.8	0.9	1.0
Did Not Attend	6.7	18.3	19.5	23.4

a. Percentages are population estimates computed with use of weights. Therefore, frequencies are not presented in the table. Percentages do not total to 100%, since respondents were allowed to mark more than one orientation.

b. Primary sources of support.

Table 55.
Possibility of Remaining in the U.S. by Sponsorship Categories (Percent Distribution[a])

How Likely that You Might Remain in the U.S.?	Sponsorship Categories[b]: A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Definitely Not	50.0	47.2	18.1	17.2
Very Unlikely	17.4	23.6	19.1	14.6
Somewhat Unlikely	4.8	6.8	13.5	9.9
Undecided	12.6	12.0	25.9	28.5
Somewhat Likely	13.1	7.2	14.2	11.5
Very Likely	0.1	1.8	6.6	12.6
Definitely Will	2.0	1.4	2.6	5.7
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.

b. Primary sources of support.

Table 56.
Reasons for Remaining Permanently in the U.S. by Sponsorship Categories (Percentages[a] of Students in each Sponsorship Category who Marked each Reason)

Which of the Following Might Make You Stay Permanently in the U.S.?[c]	Sponsorship Categories[b]: A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Political Conflict at Home	17.4	22.5	24.8	36.4
Not Being Able to Find a Job at Home	9.3	6.9	15.7	11.1
A Good Job Offer in the U.S.	5.7	16.5	32.7	28.2
Marriage to a U.S. Citizen	5.9	6.0	13.1	18.3
Family Members' Advice	14.3	3.1	5.6	9.7
Nothing Would Make Me Stay Permanently in the U.S.	45.3	50.5	23.3	21.0

a. Percentages are population estimates computed with use of weights. Therefore, frequencies are not presented in the table. Percentages do not total to 100.0%, since respondents were allowed to mark more than one reason.
b. Primary sources of support.
c. Respondents were allowed to circle more than one reason. Therefore, column percentages do not add up to 100.0%.

Table 57.
Fields of Study by Sponsorship Categories (Percent Distribution[a])

Fields of Study	Sponsorship Categories[b]: A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Engineering	21.2	21.2	28.2	23.8
Agriculture	19.1	18.6	5.5	3.9
Natural and Life Sciences	11.6	6.0	19.9	5.9
Business and Management	16.2	11.3	6.0	23.8
Education	2.8	4.8	4.7	3.0
Humanities	2.4	0.4	1.0	2.3
Health Professions	1.2	3.8	2.0	5.3
Social Sciences	3.7	7.5	11.3	7.4
Other	21.8	26.4	21.4	24.6
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.
b. Primary sources of support.

Table 58.
Regions by Sponsorship Categories
(Percent Distribution[a.])

Regions[c.]	Sponsorship Categories[b.] A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Africa	39.3	38.1	12.3	12.9
South and East Asia	36.2	19.3	69.5	32.5
Southwest Asia	9.2	13.4	6.5	36.3
Latin America	13.8	27.4	9.8	15.2
Europe	1.5	1.8	1.9	3.1
Total	100.0	100.0	100.0	100.0

a. Percentages are population estimates computed with weights assigned to all the observations according to statistical rules of sampling. Therefore, frequencies are not reported, since they are not actual but weighted.
b. Primary sources of support.
c. For countries included in each region, see Q.566 in Appendix B.

Table 59.
Marital Status by Sponsorship Categories
(Percent Distribution[a.])

Marital Status	Sponsorship Categories[b.] A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Single	55.2	37.6	51.2	64.7
Married (spouse here)	24.4	54.1	43.1	31.9
Married (spouse in home country)	19.7	8.2	3.5	2.2
Other	0.7	0.1	2.2	1.2
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.
b. Primary sources of support.

Table 60.
Classification by Sponsorship Categories
(Percent Distribution[a.])

Classification	Sponsorship Categories[b.] A.I.D.	Home Government	Scholarships & Assistantships	Self or Private Sources
Freshman	0.5	0.1	0.0	2.6
Sophomore	5.4	5.9	0.6	9.2
Junior	5.0	10.1	1.3	15.1
Senior	18.0	18.1	1.3	24.2
Master's Student	52.6	35.8	30.4	31.0
Ph.D. Student	18.3	28.8	65.5	10.2
Special Non-Degree Student	0.1	0.2	0.0	1.4
Other	0.1	1.0	0.9	6.3
Total	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.
b. Primary sources of support.

Table 61.
Secondary Sponsorship Categories by Primary Sponsorship Categories (Percent Distribution[a])

Secondary Source	Primary Sponsorship Categories: A.I.D.	Scholarships from Govt.	Ford or Rockefeller Scholarship	Fulbright Scholarship	University Assistantships	Parents or Relatives	Savings	Employment on Campus	Employment off Campus
Scholarship from Government	10.4	0.0	0.0	0.0	0.0	0.1	0.0	3.7	0.0
Fulbright Scholarship	4.7	0.7	0.0	0.0	0.9	0.2	0.0	1.6	0.0
University Assistantship	0.9	10.6	13.3	69.4	10.7	9.6	20.9	6.1	27.5
Parents or Relatives	36.4	49.2	16.1	30.6	37.2	38.4	29.1	52.4	44.7
Savings	11.2	15.7	2.0	0.0	29.0	21.9	9.8	3.7	13.5
Employment on Campus	10.2	11.2	68.6	0.0	9.9	10.7	10.6	3.9	7.7
Employment off Campus	26.2	12.6	0.0	0.0	12.3	19.1	29.6	28.6	6.6
Total	100.00	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a. See Table 48.

Table 62.
Means and Standard Errors of Importance Scores for Barriers to Good Relationships By Sponsorship Categories[a].

How Much Do You Think Each Factor is Preventing You From Having Good Relationships with U.S. Nationals?	Sponsorship Categories[b]. Sponsor 1 Mean	SE	Sponsor 2 Mean	SE	Sponsor 3 Mean	SE	Sponsor 4 Mean	SE	Significantly Different Categories[c].
Your Command of English	2.17	.11	2.16	.08	2.34	.09	2.38	.08	None
Your Religious Background	1.54	.13	1.55	.06	1.48	.06	1.62	.10	None
Your Racial Background	2.61	.13	2.40	.10	2.43	.08	2.34	.09	None
Your Cultural Background	2.57	.16	2.43	.06	2.55	.06	2.68	.11	None
Your Political View	1.86	.14	1.75	.08	1.78	.06	2.20	.13	4 vs. 3,2
Your Being a Foreigner	2.94	.09	2.95	.09	2.84	.08	3.02	.10	None
Your Attitude toward Others	2.10	.29	1.85	.07	2.19	.05	2.10	.14	3 vs. 2
Their Attitude toward You	2.99	.19	2.86	.13	2.76	.06	2.90	.09	None

a. All figures are weighted population estimates.
b. Sponsor 1 = A.I.D. sponsored, 2 = Home government sponsored, 3 = Scholarships and assistantships, 4 = Self or private sources.
c. The group means differ beyond .01 level of significance.
d. Scores: 1 = Not at all, 2 = A little, 3 = Somewhat, 4 = Much, 5 = Very much.

Table 63.
Means and Standard Errors of Perceived ratings of Academic Performance, Intelligence, Physical Appearance, and Prestige of One's Country by Sponsorship Categories[a].

How Do You Rate and How Do You Think Others Would Rate . . .?	Sponsorship Categories[b]. Sponsor 1 Mean	SE	Sponsor 2 Mean	SE	Sponsor 3 Mean	SE	Sponsor 4 Mean	SE	Significantly Different Categories[c].
1. Your Academic Performance									
Self Rating	3.64	.10	3.86	.05	4.19	.03	3.70	.05	3 vs. the rest
Rating by Friends in your Country	3.90	.12	4.09	.05	4.25	.04	3.87	.04	3 vs. the rest; 2 vs. 1,4
Rating by U.S. Students	3.68	.10	3.77	.05	4.07	.04	3.62	.08	3 vs. the rest
2. Your Intelligence									
Self Rating	3.86	.08	3.78	.07	4.03	.02	3.82	.06	3 vs. 4,2
Rating by Friends in your Country	4.10	.11	4.05	.05	4.20	.03	4.02	.04	3 vs. 2,4
Rating by U.S. Students	3.69	.13	3.65	.06	3.98	.04	3.72	.09	3 vs. the rest
3. Your Physical Appearance									
Self Rating	3.68	.07	3.58	.06	3.50	.05	3.60	.07	None
Rating by Friends in your Country	3.70	.10	3.65	.05	3.57	.04	3.70	.08	None
Rating by U.S. Students	3.33	.07	3.44	.06	3.32	.05	3.36	.11	None
4. Prestige of your Country									
Self Rating	3.21	.11	3.36	.05	3.17	.06	3.30	.09	None
Rating by Friends in your Country	3.13	.09	3.59	.06	3.37	.07	3.59	.07	2,4 vs. 1
Rating by U.S. Students	2.28	.07	2.63	.06	2.61	.07	2.62	.10	The rest vs. 1

a., b., c. See Footnotes a., b., c., Table 62.
d. Scores: 1 = Among the lowest, 2 = Fairly low, 3 = Average, 4 = Fairly high, 5 = Among the highest.

Table 64.
Means and Standard Errors of Personal Experience Data by Sponsorship Categories[a.]

	Sponsorship Categories[b.]								
	Sponsor 1		Sponsor 2		Sponsor 3		Sponsor 4		Significantly Different Categories[c.]
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	
Age	28.19	.44	29.06	.64	28.39	.25	26.13	.40	The rest vs. 4
Length of Stay in the U.S. (months)	30.96	4.20	33.94	1.76	38.94	2.39	37.71	2.30	None
Length of Stay at the School of Current Enrollment (months)	23.36	2.02	26.89	1.55	29.25	1.37	24.48	1.13	3,2 vs. 4,1
Number of Countries Visited besides the U.S.	2.90	.49	3.45	.23	2.56	.15	3.70	.25	The rest vs. 3
Length of Stay Abroad in the Above (months)	12.60	2.67	9.79	1.36	6.69	.66	11.27	.80	The rest vs. 3

a. All figures are weighted population estimates.

b. Sponsor 1 = A.I.D. sponsored, 2 = Home government sponsored, 3 = Scholarships and assistantships, 4 = Self or private sources.

c. The group means differ beyond .01 level of significance.

Table 65.
Marital Status of Students by Regions of Origin (Percent Distribution[a])

Marital Status	Regions: Africa	South and East Asia	Southwest Asia	Latin America	Europe
Single	44.9	57.5	66.1	47.2	77.2
Married (spouse here)	43.0	36.5	30.9	50.4	19.4
Married (spouse in home country)	10.7	4.6	2.4	1.0	1.3
Other	1.4	1.4	0.6	1.4	2.1
Total	100.0	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.

Table 66.
Fields of Study by Regions of Origin (Percent Distribution[a])

Fields of Study	Regions: Africa	South and East Asia	Southwest Asia	Latin America	Europe
Engineering	17.0	24.7	35.5	16.1	15.3
Agriculture	12.4	4.8	5.7	12.8	3.6
Natural and Life Sciences	7.1	12.6	6.5	8.7	0.0
Business and Management	16.3	17.3	14.8	20.6	17.3
Education	6.2	2.7	2.4	4.3	8.4
Humanities	1.2	0.9	0.2	3.7	7.8
Health Professions	7.5	4.3	1.0	3.5	11.8
Social Sciences	10.2	6.9	9.1	7.3	8.4
Other	22.1	25.8	24.8	23.0	27.4
Total	100.0	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.

Table 67.
Likelihood to Remain Permanently in the U.S. by Fields of Study
(Percentage Distribution[a])

Remaining Permanently in the U.S.	Fields of Study								
	Engineering	Agriculture	Natural & Life Sciences	Business & Management	Education	Humanities	Health Professions	Social Sciences	Others
Definitely Not	19.1	43.5	24.9	16.9	52.9	28.6	28.1	32.8	25.6
Very Unlikely	19.8	25.3	14.8	14.3	15.1	14.8	8.5	21.7	19.3
Somewhat Unlikely	10.4	6.9	5.9	15.9	6.0	4.1	2.4	6.9	10.9
Undecided	25.2	13.4	24.2	29.3	16.1	22.0	26.5	22.0	20.6
Somewhat Likely	13.6	8.9	13.1	10.3	2.1	1.3	16.8	2.9	11.8
Very Likely	8.5	1.4	12.9	8.4	7.8	20.5	12.6	10.2	7.2
Definitely Will	3.4	0.6	4.2	4.9	0.0	8.7	5.1	3.5	4.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.

Table 68.
Reasons for Remaining Permanently in the U.S. by Fields of Study
(Percentages [a] of Students in each Field of Study who Marked each Reason)

Which of the Following Might Make You Stay Permanently in the U.S.?[b]	Fields of Study								
	Engineering	Agriculture	Natural & Life Sciences	Business & Management	Education	Humanities	Health Professions	Social Sciences	Others
Political Conflict at Home	30.4	33.0	22.6	28.4	27.2	27.8	28.3	29.6	30.8
Not Being Able to Find a Job at Home	12.8	9.0	13.9	7.3	10.6	23.2	13.1	5.4	12.9
A Good Job Offer in the U.S.	29.8	12.2	24.9	31.0	11.5	25.2	24.2	21.7	24.7
Marriage to a U.S. Citizen	13.3	4.0	14.2	18.7	5.0	30.4	8.0	11.6	15.3
Family Members' Advice	7.1	2.4	11.9	8.5	5.1	0.0	11.5	7.8	6.2
Nothing Would Make Me Stay Permanently in the U.S.	24.7	44.8	29.8	15.3	44.3	34.1	34.2	32.1	30.8

a. Percentages are population estimates computed with use of weights. Therefore, frequencies are not presented in the table. Percentages do not total to 100.0%, since respondents were allowed to mark more than one reason.

b. Respondents were allowed to circle more than one reason. Therefore, column percentages do not add up to 100.0.

Table 69.
TOEFL Scores by Fields of Study
(Percent Distribution[a])

TOEFL Score Ranges	Fields of Study								
	Engineering	Agriculture	Natural & Life Sciences	Business & Management	Education	Humanities	Health Professions	Social Sciences	Others
Never Taken TOEFL	23.4	29.0	17.9	30.1	22.1	44.3	26.4	35.6	27.3
Below 400	0.2	0.6	1.3	0.0	0.0	0.0	0.0	0.0	0.5
400-450	3.0	5.8	4.5	3.9	2.3	0.0	7.5	5.0	4.3
451-500	9.4	13.9	10.7	17.6	12.3	6.4	8.5	9.4	10.4
501-550	25.0	23.6	30.3	20.5	33.2	9.4	26.6	16.3	27.4
551-600	22.0	16.3	15.7	18.0	11.7	8.1	17.9	23.8	15.8
Over 600	17.0	10.8	19.6	9.9	18.4	31.8	13.1	9.9	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.

Table 70.
Finding Future Jobs by Fields of Study
(Percent Distribution[a])

Are You Trying To Find a Job In your Country Now?	Fields of Study								
	Engineering	Agriculture	Natural & Life Sciences	Business & Management	Education	Humanities	Health Professions	Social Sciences	Others
Yes, I am	13.9	16.2	16.4	10.1	6.3	13.4	10.3	12.1	11.4
No, but Plan to Do So	25.4	18.5	33.6	39.5	29.2	32.5	22.3	27.7	28.7
No, and no Plans to Do So	39.9	13.8	35.6	36.4	21.6	21.4	38.0	34.4	34.6
No, because Job is Waiting	20.8	51.5	14.4	14.0	42.9	32.7	29.4	25.8	25.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.

Table 71.
Marital Status by Fields of Study
(Percent Distribution[a])

Marital Status	Major								
	Engineering	Agriculture	Natural & Life Sciences	Business & Management	Education	Humanities	Health Professions	Social Sciences	Others
Single	66.4	46.5	63.3	59.8	29.3	40.2	54.7	40.3	53.3
Married (spouse here)	28.7	42.4	29.6	36.8	63.2	52.1	35.8	53.4	41.6
Married (spouse in home country)	4.4	8.5	6.6	1.6	7.4	4.6	9.3	4.3	3.7
Other	0.5	2.7	0.6	1.8	0.1	3.1	0.1	2.1	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a. See Footnote a., Table 48.

Table 72.
Fields of Study and Classification by Sex Categories
(Percent Distribution[a])

Field of Study	Sex Categories: Female	Sex Categories: Male	Classification	Sex Categories: Female	Sex Categories: Male
Engineering	6.2	29.9	Freshman	2.1	1.4
Agriculture	3.8	9.5	Sophomore	8.2	5.4
Natural & Life Sciences	10.3	8.6	Junior	12.0	10.2
Business & Management	18.1	16.7	Senior	16.4	17.4
Education	6.1	2.9	Master's Student	36.3	31.4
Humanities	4.1	0.8	Ph.D. Student	19.0	30.3
Health Professions	8.7	2.7	Special Non-degree Student	2.2	0.4
Social Sciences	9.9	7.8			
Others	32.8	21.1	Others	3.8	3.5
Total	100.0	100.0	Others	100.0	100.0

a. See Footnote a., Table 48.

Table 73.
Regions of Origin and Marital Status by Sex Categories
(Percent Distribution[a])

Region	Sex Categories: Female	Sex Categories: Male	Marital Status	Sex Categories: Female	Sex Categories: Male
Africa	10.7	23.0	Single	60.1	54.1
South and East Asia	45.7	35.4	Married, spouse here	35.9	39.4
South and West Asia	19.8	24.3	Married, spouse in home country	1.4	5.7
Latin America	19.4	15.5	Other	2.6	0.8
Europe	4.4	1.8			
Total	100.0	100.0	Total	100.0	100.0

a. See Footnote a, table 48.

Table 74.
Types of Residence and Living Arrangement by Sex Categories
(Percent Distribution[a])

Residence	Sex Categories: Female	Male	With Whom Do You Live?	Sex Categories: Female	Male
Dormitory	14.4	10.6	U.S. Family	4.0	1.2
Married Student Housing	19.7	22.1	U.S. Student(s)	10.2	9.3
Room off Campus without Cooking	0.9	1.5	Foreign Student(s) from another Country	6.5	4.9
Room off Campus with Cooking	7.3	10.2	Student(s) from your Country	13.0	17.9
Apartment	44.9	45.9	Your Spouse (and children)	35.3	37.8
Trailer	0.7	0.9	Alone	19.7	21.3
Other	12.1	8.8	Other	11.3	7.6
Total	100.0	100.0	Total	100.0	100.0

a. See Footnote a., table 48.

Table 75.
Selected Personal Characteristics of the Sample[a]

Age	Frequency	Percent
17-22	256	14.4
23-27	654	36.8
28-32	525	29.6
33-37	235	13.2
38 over	106	6.0
Total	1776	100.0

Sex	Frequency	Percent
Male	1412	78.1
Female	396	21.9
Total	1809	100.0

Marital Status	Frequency	Percent
Single	943	51.3
Married, with the spouse	715	39.0
Married, without the spouse	147	8.0
Other	32	1.7
Total	1837	100.0

Academic Level	Frequency	Percent
Freshman	19	1.0
Sophomore	114	6.0
Junior	168	9.0
Senior	254	14.0
M.S. Student	627	34.4
Ph.D. Student	580	32.0
Other	67	3.6
Total	1829	100.0

Countries of Origin[b]

Africa	Frequency	Percent
Nigeria	186	10.3
Kenya	36	2.0
Sudan	30	1.7
Egypt	25	1.4
Ghana	21	1.2
Other	215	11.9
Subtotal	513	28.5
Europe		
Turkey	24	1.3
Other (Portugal)	3	0.2
Subtotal	27	1.5

Southwest Asia	Frequency	Percent
Iran	118	6.5
Israel	23	1.3
Jordan	20	1.1
Other	58	3.2
Subtotal	219	12.1
Latin America		
Venezuela	71	3.9
Brazil	46	2.6
Mexico	44	2.4
Colombia	34	1.9
Chile	23	1.3
Other	131	7.2
Subtotal	349	19.3

South and East Asia	Frequency	Percent
Taiwan	136	7.5
India	128	7.1
Thailand	94	5.2
Indonesia	81	4.5
Malaysia	68	3.8
Korea	66	3.7
Philippines	31	1.7
Pakistan	30	1.7
Other	61	3.4
Subtotal	695	38.6
Total	1803	100.0

Major

	Frequency	Percent
Engineering	400	21.8
Agriculture	273	14.9
Business & Management	214	11.6
Natural & Life Sciences	168	9.1
Social Sciences	153	8.3
Education	86	4.7
Health Professions	60	3.3
Humanities	31	1.7
Other	452	24.6
Total	1837	100.0

a. Total frequencies varied by characteristics due to different missing cases.
b. Only those countries with twenty or more respondents are listed.

VI. RECOMMENDATIONS

1. Needs for practical experience before returning home were the least met needs. Practical experience, such as a type of internship, could be made part of the degree program so that schools could formally assist students, especially in certain fields, to have needs met before returning home. In our opinion, accommodation of this type of need will enhance the value of U.S. education to students from developing nations.
2. Students anticipated certain material and professional needs to be unmet upon returning home. (This anticipation was less acute among those supported by A.I.D. and home governments.) This anticipated frustration has ramifications to various aspects of their stay in the U.S. It is our recommendation that students be given some assurance with regard to material rewards (jobs, etc.), opportunities and facilities to further their professional growth by their home governments. The U.S. government and U.S. educational institutions might be able to assist or cooperate with the home government in this regard.
3. We contend that providing foreign students with assistantships is a more beneficial means of support in that students have significantly more satisfying experiences in the U.S. We suggest that both A.I.D. and home governments consider providing assistantships by channeling funds to specific departments of colleges and universities where prospective students will be located as a viable alternative to the current manner of assisting students with scholarships.
4. Self-evaluated command of English was a substantial predictor of satisfaction in a variety of needs. In order to have students feel satisfied with their stay, a sound preparation in English skills is a must. A good command of English is much needed in order for students to have meaningful experiences at the interpersonal and community levels. Remedial English courses could be strengthened, along with the addition of intermediate courses.
5. Needs for relevant education and for training to apply knowledge were emphasized by students in most fields of study, but particularly in agriculture. These are the types of needs educational institutions could accommodate by improving the current curriculum. Whether these needs are being met or not will have far reaching consequences pertaining to the use of training and knowledge that students have when they return to their home countries. If these needs are not met, the student's training may not be best used.
6. Regions of the world from which students came made significant differences in terms of importance of certain needs and satisfaction. Even though emphasized by students from all the regions, African students particularly placed high importance on the above points (see 5). We are under a strong impression, based on the preliminary analysis of data, that students from different regions of the world have different perceptions of their acceptance which lead to different degrees of satisfaction, particularly in those needs involving interpersonal interac-

tions. One of the groups which perceived the least satisfaction in receiving equal acceptance by faculty and human respect by U.S. students was the group who were most likely to return home, i.e. African students. We must deplore this situation. We cannot over-emphasize the strong need for improving human relations between U.S. nationals, faculty included, and foreign students in academic institutions, especially when we recognize that today's foreign students are likely to become tomorrow's leaders in those nations.

7. Students living with U.S. students tended to have more satisfying interpersonal experiences and stronger confidence in both primary and secondary goal attainment than those living with fellow countrymen in particular. U.S. educational institutions could assist and encourage foreign students to live with U.S. students. Such arrangements can even be made in advance for foreign students, if so desired by them.
8. Overall, students with jobs in their home countries enjoyed a more satisfying stay in the U.S. as measured by academic and interpersonal items. We wish to re-emphasize the importance of guaranteed job opportunities for students in order to ensure more satisfying experiences for them in the U.S. Those with jobs waiting scored the lowest in placing importance on the need for practical experience. However, this did not hold in every field. Needs for work experience and opportunities to apply knowledge gained in the class before returning home appeared to be genuine among many students who had jobs waiting for them in their home countries, as well as among others.

Finally we wish to express our opinions. U.S. educational institutions are encouraged to make an accommodation to meet the needs of foreign students for training to apply knowledge and practical experience before they return home. They are also encouraged to contribute in having the post-return needs met. Accommodating the needs for practical experience might raise a concern among some who speculate that practical training might lead to a permanent stay in the U.S. We suggest that educators in U.S. institutions reevaluate the objectives of U.S. education with regard to foreign students. Is it to educate foreign students, regardless of country of origin, for advancement of the world community of sciences and humanities? Or is it to educate students to meet the needs of their home countries? If the former is the major objective, the issue of return intention becomes irrelevant. Once educated, graduates should be given the best opportunities in the most facilitating environments to most effectively contribute their talents to the advancement of the international community of knowledge. If the second is to be the primary objective of U.S. education, than we contend that U.S. educational institutions and government, in conjunction with students' home governments, need to better plan and ensure that students be given appropriate professional opportunities and facilities to utilize their training and further advance their knowledge upon returning to their home countries. Such a plan should ideally be made before students leave their countries, so that they will experience greater satisfaction while

in the U.S. Under this objective, U.S. educational institutions would be obliged to accommodate the need for more relevant programs and more practical training so that students could see how to apply their U.S. education to the situations in their home countries.

Education should be regarded as a continuous process. U.S. educational institutions may be in the best position to provide continuous opportunities and facilities to further enhance professional growth of the returnees in cooperation with institutions of higher education in developing countries. Intergovernmental cooperation is also essential to achieve these objectives. International education should not end on the day students leave for their home countries. By providing opportunities and facilities for continuous professional growth to the returnees, we can hope to have the returnees in developing nations contribute to the international community of knowledge.

VII. REFERENCES CITED

Altscher, Diane C.
1976 A rationale for a counseling program designed uniquely for international students. Paper presented at the annual convention of the American Personnel and Guidance Association, Chicago, Illinois. April 11-14, 1976.

Ayers, Jerry B. and R. Martin Peters
1977 Predictive Validity of the Test of English as a Foreign Language for Asian Students in Engineering, Chemistry or Mathematics. Educational and Psychological Measurement, Summer 37(2): 461-463.

Babbie, Earl
1979 The Practice of Social Research. Second edition. Belmont, California: Wadsworth Publishing Co., Inc.

Basu, Arun Chandra
1966 A study of graduate agricultural students from India at selected land-grant colleges and universities in the United States. Ph.D. dissertation. University of Missouri.

Berkowitz, L.
1969 Social Motivation. In G. Lindzey & E. Aronson (Eds.), the Handbook of Social Psychology (Vol. 3). Reading, Mass.: Addison-Wesley.

Bohn, Ralph Carl
1957 An evaluation of the educational program for students from foreign countries: Emphasis upon orientation procedures, individual problems, and psychological variables. Ed.D. dissertation, Wayne State University.

Borhanmanesh, Mohamad
1965 A study of Iranian students in Southern California. Ph.D. dissertation, University of California, Los Angeles.

Bouenazos, Kimon and Mary K. Leamy
1974 An exploratory study concerning attitudes of foreign students enrolled at West Michigan University, West Michigan University.

Bower, James R., et al.
1971 The AACRO-A.I.D. participant selection and placement study. Report to the Office of International Training, A.I.D., Washington, D.C.

Breuder, Robert L.
1972 A Statewide Study: Identified Problems of International Students Enrolled in Public Community/Junior Colleges in Florida. Tallahassee, Fla.: Florida State University, Department of Higher Education.

Cannon, G.
1959 Foreign students in the United States, American Association of University Professors Bulletin 45: 539-542.

Center, Jacob
1967 "Our Common Challenge in International Education." Junior College Journal 37: 14-16.

Chiang, S. H. and G. E. Klinzing
1975 How Would that Work Back Home: ERIC Report.

Chongolnee, Burunchai
1978 Academic, situational, organismic, and attitudinal factors affecting the academic achievement of foreign graduate students at Iowa State University. Ph.D. dissertation, Iowa State University.

Chu, Goodwin C.
1968 "Student Expatriation: A Function of Relative Social Support." Sociology and Social Research 52: 174-84.

Clark, Violet Esther Wuerfel
1963 Ghanaian students in the United States. Ph.D. dissertation, University of Michigan.

Clarke, Helen and Martha Ozawa
1970 The Foreign Student in the United States. University of Wisconsin, Madison, Wisconsin.

Clubine, Eugine
1966 The foreign student's differential knowledge and use of staff members in response to problem situations. Masters Thesis, Iowa State University.

Collins, Paul L.
1976 Self-perceived Problems of International Students attending Howard University. Ph.D dissertation. Howard University.

Comay, Peter Yochanan
1969 International migration of professional manpower: The Canadian case. Ph.D. dissertation. Princeton University.

Coombs, Philip H.
1961 "International educational exchange: A work for many hands." Higher Education 18 (September): 3-6.

Cortes, Josefina R.
1970 Factors associated with the migration of high level persons from the Philippines to the U.S.A. Stanford International Development Education Center, Stanford, California.

Culha, Meral Ulker
1974 Needs and satisfactions of foreign students at the University of Minnesota. Ph.D. dissertation. University of Minnesota.

Das, Man Singh
1971 "The brain drain' controversy in Comparative Perspective." Social Science 46: 16-25.

Das, Man Singh
1969 Effects of foreign students attitudes towards returning to the country of origin and the national loss of professional skill. Ph.D. dissertation. Oklahoma State University.

Davis, James L.
1973 "Work experience as a component of education exchange: a study of exchange visitor program. P-III-4320". Council on International Educational Exchange, New York.

Day, Jerry Richard
1968 A study of differential effects of length of time in the United States on foreign graduate and undergraduate students with regard to the number, severity, and category groupings of problems he experiences. Ph.D. dissertation. Oklahoma State University.

Deutsch, Steven E.
1970 International Education and Exchange: A Sociological Analysis. Cleveland, Ohio. Case Western Reserve University Press.

Deutsch, Steven E.
1965 International Aspects of Higher Education and Exchange: A Community Study. Cleveland, Ohio. Wester Reserve University.

Dhillon, Gita L.
1970 "Problems of students returning to Asia." International Educational and Cultural Exchange 5 (Spring): 41-50.

DuBois, Cora A.
1956 Foreign students and higher education in the United States, Washington, D.C., American Council on Education.

Dunnett, Stephen Charles
1977 A study of the effects of an English language training and orientation program on foreign student adaptation at the State University of New York at Buffalo. Council on International Studies, State University of New York at Buffalo, Special studies No. 93.

Eberhard, Wolfram
1970 "Problems of students returning to Asia." International Educational and Cultural Exchange 5 (Spring): 41-50.

Edgerton, Wallace B.
1975 "Trends in educational exchange." International Educational and Cultural Exchange 11(1): 11-16, 44.

El-Lakany, F.A.
1970 Prediction of academic achievement of foreign students at Iowa State University, 1969-1970. Ph.D. dissertation. Iowa State University.

Elting, Robert Arthur
1970 The prediction of freshman year academic performamce of foreign students from preadmission data. Ph.D. dissertation, New York University.

Findley, M. E.
1975 "Appropriate Programs for Foreign Students in U.S. Chemical Engineering Curricula." Research in Education, ED118454.

Flack, Michael
1976 Results and Effects of Study Abroad. The Annals of the American Academy of Political and Social Science 424: 107-117, March.

Ford, Charles Christopher
1969 A case study of the adaptational patterns of Asian graduate students in education at Michigan State University. Ph.D. dissertation. Michigan State University.

Fuller, Wayne A.
1979 Private communication, Department of Statistics,
1980 Iowa State University.

Gabriel, L. Rhodelia
1973 "Characteristics of foreign students on an American campus." Journal of the National Association of Women Deans and Counselors: 36: 184.

Gaither, Gerald H. and Anthony C. Griffin
1971 The International Students at the University of Tennessee, Knoxville, Office of Institutional Research. University of Tennessee.

Gama, Elizabeth, M. P., and Paul Pederson
1976 "Readjustment Problems of Brazilian Returnees from Graduate Studies in the United States." International Journal of Intercultural Relations. 4: 46-59. W. 77.

Gezi, K. I.
1961 "Arab Students' Perceptions of American Students." Sociology and Social Research 45: 441-447.

Glazer, A. William, et al.
1974 "The Migration and Return of Professionals." International Migration Review 8 (Spring): 224-244.

Guglielmo, Hector
1967 Rights and obligations of foreign students in an American university. Ph.D. dissertation. University of Arizona.

Hagey, A. R. and Jean Hagey
1974 "Meeting the Needs of Students from other Cultures." Improving College and University Teaching, 2 (Winter): 42-43.

Halasz, Sari C.
1969 University of California, Los Angeles Study II: graduate students from Indonesia, Korea, Pakistan and Thailand: Fall 1959 through Spring 1967. College and University 45.

Han, Pyung Eui
1975 A study of goals and problems of foreign graduate students from the Far East at the University of Southern California. Ph.D. dissertation, University of Southern California.

Harfoush, Sanira M.
1977 A study of adjustment problems and attitudes of United Arab Emirates undergraduate students in the U.S. during fall of 1977. Unpublished Ph.D. dissertation, Georgetown Washington University.

Heft, David
1963 The training of foreign students: Its impact on tensions among nations. Organization of American States. Unpublished paper.

Helms, Anne
1978 Cultures in Conflict: Arab Students in American Universities. Research in Education. ED157851.

Henderson, Gregory
1964 "Foreign students: exchange or immigration." International Development Review 6: 19-21.

Hidiroglou, Michael A., Wayne A. Fuller & Roy D. Hickman
1979 Super Carp. Fifth edition. Ames, Iowa: Iowa University.

Hj:zainuddin, Tarmodi Bin
1974 Factors associated with the academic performance of Malaysian students at Louisiana State University. Master thesis. Louisiana State University.

Ho, Genevieve P.
1965 Adaptation to American dietary patterns by students from Oriental Countries. Unpublished Ph.D. dissertation. Pennsylvania State University.

Holland, Kenneth
1956 "Statistics and comments on exchange with the United States." International Social Science Bulletin 8, No. 4, pp. 628-37.

Hountras, Peter T.
1957 "Factors related to academic probation among foreign graduate students." School and Society 85: 311-312.

Hountras, Peter T.
1956 "Academic probation among foreign graduate students." School and Society 84: 157-176.

Hull, C. Hadlai and Norman H. Nie
1979 SPSS Update. New York: McGraw-Hill Book Company.

Hull, W. Frank, IV
1978 Foreign Students in the United States of America: Coping behavior within the educational environment. New York, New York: Praeger Publishers.

Jenkins, Hugh M.
1977 "Foreign Student Perceptions of Four Critical Components Related to Educational Experiences at Western Michigan University." Ph.D. dissertation.

Johnson, Dixon C.
1971 "Problems of Foreign Students." International Educational and Cultural Exchange 7: 61-68.

Julian, Alfred C., Janet Lowenstein & Robert E. Slattery
1979 Open Doors/1977-1978. Report on International Education Exchange. N.Y., Institute of International Education.

Kaplan, Robert B.
1970 "NAFSA in the Mod Mod World." Exchange 6, No. 2, pp. 68-75.

Kelly, William
1966 Horticultural training of graduate students from developing countries. A paper presented at the 17th International Horticultural Congress, College Park, Maryland.

Kimmel, Paul
1969 Orientation of A.I.D. trainees at the Washington International Training Center, DETRI. Washington, D.C.

Kimmel, Paul, et al.
1969-1972 Participant Assessment of A.I.D. Training Programs. Status Reports 1-5. DETRI. Washington, D.C.

Kincaid, Harry V.
1951 A preliminary study of the goals and problems of the foreign students in the United States. Menlo Park, Standord Research Institute.

Kish, Leslie
1965 Survey Sampling, N.Y., John Wiley.

Klien, Majorie H., A. A. Alexander and Kow-Hwa Tseng
1971 "The foreign student adaptation program: social experiences of Asian students." International Cultural and Educational Exchange 6: 77-90.

Knudsen, Robert G.
1977 A fault tree approach to an international education program: California State University and Colleges. Ph.D. dissertation. California State University.

Lather, Frances L.
1978 Foreign Student Perceptions of Four Critical Components Related to Educational Experiences at Western Michigan University. Ph.D. Dissertation. Dissertation Abstract International 39 (04), Sec. A., p. 2087.

Lee, Motoko Y., Mokhtar Abd-Ella and Linda Burks Thomas
1979 Need Assessment of Foreign Students from Developing Nations: A Research Design. The Final Report of Phase I. Sociology Report No. 144. Ames, Iowa, Iowa State University.

Lindgren, Henry Clay
1973 An Introduction to Social Psychology. 2nd ed. New York: John Wiley and Sons.

Longest, James W.
1969 Evaluating Orientation for Foreign Students. Ithaca, New York. State University of New York, College of Agriculture at Cornell.

Lozada, Rhodelia Corazon B.
1970 Foreign students at Purdue University: A study of selected personnel and academic characteristics in relation to current experiences and future expectations. Ph.D. dissertation. Purdue University.

Mackson, C.J.
1975 "What do foreign graduates think about their U.S. degree programs." Engineering Education 66 (May): 830-831.

Maslow, A. H.
1943 "A theory of human motivation." Psychol. Rev. 50, 370-396.

Melendez-Craig, Mario
1970 A study of the academic achievement and related problems among Latin American students enrolled in the major Utah Universities. Ph.D. dissertation, Brigham Young University.

Merton, Robert K.
1957 Social theory and social structure. Glencoe, Illinois, The Free Press.

Moftakhar, Hossein
1976 "A descriptive study of some of the problems of Iranian students attending Oklahoma State University." Ph.D. dissertation.

Moghrabi, Kamel
1972 "Educating foreigners in the United States." Improving College and University Teaching 20 (Autumn): 329-332.

Moore, Forrest G.
1970 "International education in the seventies: revolution or turmoil on the campus." International Educational and Cultural Exchange 6: 34-47.

Moore, Forrest G.
1965 The collegiate environment; the experience and reactions of foreign students, government-sponsored and self sponsored. Preliminary draft for Bureau of Social Science Research Meeting of October 13-17.

Morris, Richard T.
1960 The Two-Way Mirror: National Status in Foreign Students' Adjustment. Minneapolis. University of Minnesota Press.

Myer, Richard B.
1979 "Survey of LDC Alumni of Four U.S. Universities." Paper presented at the Conference on International Education, Washington, D.C., February.

Myers, Robert G.
1972 Education and Emigration, Study Abroad and Migration of Human Resources. New York. David McKay Company, Inc.

Myers, Robert G.
1967 Study abroad and the migration of human resources. Ph.D. dissertation. University of Chicago.

NAFSA
1972 Guidelines: U.S.-Foreign Student Relationships. Washington, D.C.

Nenyod, Boonmee
1975 Analysis of problems perceived by foreign students enrolled in state colleges and universities in the state of Texas. Ph.D. dissertation. East Texas State University.

Nie, H. Norman, et al.
1975 Statistical Package for the Social Sciences. 2nd edition. New York: McGraw-Hill, Inc.

Niekerk, Andre Bernard
1975 An analysis of the perceptions held by faculty and staff, foreign alumni and foreign students of the services available to foreign students at Andrews University. Ph.D. dissertation, Andrews University.

Niland, John R.
1970 The Asian engineering brain drain: A study of international relocation into the United States from India, China, Korea, Thailand, and Japan. Lexington, Mass.: D. C. Heath and Company.

Ogunbi, Adebayo Joseph
1978 The perceived relevance of foreign students' training to their role as future change agents in national development. Unpublished Ph.D. dissertation. Michigan State University.

Ohuche, Romanus Ogbonna
1967 Scholastic factors pertaining to the academic achievement of Nigerian students in the United States. Ph.D. dissertation, Iowa State University.

Orr, James Darby, Jr.
1971 The foreign scholar returned home: A review of selected research. Ph.D. dissertation, Columbia University.

Ott, Lyman
1977 An Introduction to Statistical Methods and Data Analysis. North Scituate, MA.: Duxbury Press.

Palmer, Roy Virgil
1968 The problem of talent migration and the role of the small private college in foreign student education. Ph.D. dissertation, University of Michigan.

Parsons, Talcott, et al.
1965 "Some fundamental categories of the theory of action: a general statement?" in Parsons, Talcott, et al, eds. Toward a general theory of action. pp. 31-29. N.Y., Harper & Row, Publishers.

Pavri, Dina Mehrvanji
1963 A study of the scholastic achievement and related problems of foreign graduate students at the University of Virginia from 1957 to 1961. Ph.D. dissertation, University of Virginia.

Penn, J. Roger and Marvin L. Durham
1978 "Dimensions of Cross-Cultural Interaction." Journal of College Student Personnel, Vol. 19 (3), 264-267.

Perkins, Corlyn S. et al.
1977 "A Comparison of the adjustment problems of three international student groups." Journal of College Student Personnel, Vol. 18 (5), 382-388.

Peterson, James A. and Martin H. Neumeyer
1948 "Problems of foreign students." Sociology and Social Research 32: 787-792.

Porter, John Wilson
1962 The development of an inventory to determine the problems of foreign students. Ph.D. dissertation, Michigan State University.

Preston, Harley O.
1966 Operations of the participant training program of the Agency for International Development. The Agency for International Development. Washington, D.C.

Pruitt, France J.
1977 The adaptation of African students to American education, State University of New York at Buffalo, a report to the Bureau of Educational and Cultural Affairs, U.S. Department of State.

Putman, Ivan Jr. (NAFSA)
1965 The Foreign Student Advisor and his Institution on International Student Exchange. Washington, D.C.

Quinn, Walter Albert
1975 A study of selected sojourn preferences and priorities of Stanford University foreign students. Ph.D. dissertation. Stanford University.

Rising. M. N. and B. M. Coop
1968 Adjustment experiences of non-immigrant foreign students at the University of Rochester, 1967-1968. Rochester: University of Rochester.

Ritterband, Paul
1968 Out of Zion: The non-returning Israeli students. Ph.D. dissertation. Columbia University.

Roudiani, Iraj
1976 Foreign Students: A Comparative and Correlational Study in Frames of Reference, Length of International Experiences, and Patterns of Interaction in a Multi-Cultural Environment. Ph.D. dissertation. Indiana University.

Sanders, I. T. and J. G. Ward
1970 Bridges to Understanding. New York: McGraw-Hill.

Seidenberg, Bernard and Alvin Snadowski
1976 Social Psychology. New York: The Free Press.

Selltiz, Clair, et al.
1963 Attitudes and Social Relations of Foreign Students in the United States. Minneapolis, University of Minnesota Press.

Sharma, Sarla
1971 A study to identify and analyze adjustment problems experienced by foreign non-European graduate students enrolled in selected universities in the state of Nroth Carolina. Ph.D. dissertation. University of North Carolina at Greensboro.

Shattuck, Gerald M.
1961 Between two cultures: A study of the social adaptation of foreign students to an American academic community. Cornell University, Cornell International Agricultural Development Monograph No. 12.

Shepard, Nolan Edgbert
1970 The acculturation of foreign students in Southern colleges and universities. Ph.D. dissertation. University of Mississippi.

Shin, Kuk Bom
1972 The post graduation residency plans of Korean students attending selected universities in Michigan. Ph.D. dissertation. Michigan State University.

Singh, Harmohinder Paul
1976 A survey of socioeconomic problems and nonreturn of selected foreign graduate students at the University of Tennessee. Ph.D. dissertation. The University of Tennessee.

Siriboonma, Umporn
1978 An analysis of student satisfaction as perceived by foreign students at Iowa State University. Ph.D. dissertation. Iowa State University.

Spaulding, Seth and Michael J. Flack
1976 The World's Students in the United States: A Review and Evaluation of Research on Foreign Students. New York, New York: Praeger Publishers.

Stafford, Thomas H. Jr. and others
1978 "Relationships between Adjustment of International Students and their Expressed need for Special Programs and Services at a U.S. University: Research and Implications." Research in Education. ED155579.

Stone, Benjamin
1969 "Gaps in graduate training of students from abroad." Science, p. 1118.

Sugimoto, Roy Atsuro
1966 The relationship of selected predictive variables to foreign student achievement at the University of California, Los Angeles. Ph.D. dissertation. University of Southern California.

Tanenhaus, John and Sidney Roth
1962 "Non-immigrant foreign students: A survey of their needs and interests" Journal of Experimental Education 31: 173-176.

Thames, John Alsop
1971 Korean students in Southern California: Factors influencing their plans toward returning home. Ph.D. dissertation. University of Southern California.

Uehara, Soichi
1969 A study of academic achievement of F-1 classed aliens and other non-immigrant temporary students at Kapiolani Community College. Honolulu, Hawaii: Kapiolami Community College.

Ursua, Aurora Ricardo
1969 The relationship between adeptness in the English language and social adjustment of foreign graduate students. Ph.D. dissertation. Catholic University of America.

Von Dorpowski, Horst
1977 The Problems of Oriental, Latin American, and Arab Students in U.S. Colleges and Universities as perceived by these Foreign Students and Foreign Student Advisors. Ph.D. dissertation Pennsylvania State University.

Vorapipalana, Kowit
1967 A study of the Thai graduates' training program in the field of education from the United States. Ph.D. dissertation. University of Utah.

Walter, Jane H.
1978 Counseling Appropriateness: An Exploration from a Cross-Cultural Perspective. Research in Education. ED159751.

Warren, Richard D.
1980 Private communication, Department of Statistics, Iowa State University.

Wilson, W. Douglas
1975 "Social Relationships of International Students attending Oklahoma State University." Ph.D. dissertation.

Win, U. K.
1971 A study of the difficulties Indian and Japanese students encountered in six problem areas at the University of Southern California, 1969-1970. Ph.D. dissertation. University of Southern California.

World Bank
1977 World Bank Atlas: Population, Per Capita Product, and Growth Rates. Washington, D.C.: The World Bank.

Wotiz, John H.
1977 "The Education of Foreign Chemists in America." Journal of Chemical Education 54(7): 413-6. Jul. 77.

Zain, Ellas K.
1966 A study of academic and personal-social difficulties encountered by a selected group of foreign students at the University of Oregon. Ph.D. dissertation. University of Oregon

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APPENDIX A: OTHER RESPONSES[1]

Following each category of need items on the questionnaire, an item called other needs was inserted. Many respondents availed themselves of the opportunity to articulate additional needs and concerns not fully tapped by the questionnaire. Out of 1,857 respondents, only a small fraction of them wrote in other responses. However, we found some of their responses rather revealing and thought provoking. A summary of the responses to each category follows.

Information (75 responses):

The foreign students wanted to know about availability of transportation (within the community and to airports), safety of cities, regulations on driving, racial attitudes and prevalence of discrimination among U.S. nationals, and opportunities for jobs. Expense evidently entered into many of their concerns, because information as to costs of travel and availability of an emergency cash/loan fund were mentioned.

More detailed information about universities was desired. Respondents felt it would be advantageous to know *in advance* about universities and their specialities, plus more details on the entire college system (exams, credits, majors). A need for further English courses was mentioned as the course currently offered are too rudimentary, e.g. intermediate English courses for graduate students would be helpful.

Degree program (45 responses):

Additional responses within the degree program fell into two categories—money and applicability of the program. Foreign students seemed to feel that they are overcharged by universities (because they pay 3-4 times the in-state tuition) and that more and higher-paying assistantships should be available.

Course requirements need to be more flexible, because courses like American history and political science are not of much use to a foreign student. Most research was seen as geared to the department's research program, not to the students' needs. Foreign students also felt that information about research going on in the home country was of great importance.

Relevancy of the degree program (20 responses):

Comments in this area were best summarized by this student: "Classroom learning is very ok, but practical experience is not there. Even co-op, though allowed is not in practice." Apparently practical experience

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[1] The material presented in this appendix was organized by Barbara Munson, one of our data assistants, who also acted as our editor based on her training and experience in English language instruction. The authors wish to acknowledge Mrs. Munson for her special contribution to this section.

for two to three years in the U.S. before returning to the home country is a major unfulfilled need of foreign students. Another concern was continuing communication between the U.S. universities and the student's home country after the student's return. Even though we included items tapping these issues, some students still emphasized them by restating them in their own words.

Extracurricular professional activities (33 responses):

Again the need for practical work experience before leaving the U.S. was stressed. This could be accomplished through post-doctoral fellowships, internship programs, or even by working during breaks and summer vacations. Such work would be helpful in applying knowledge to the home country and allowing the student to work out "doubts or problems" as his/her study progresses. Immigration regulations were perceived as the big problem in attaining these goals.

Professional activities were also seen as a help in bridging the gap between the theoretical and the practical. As several respondents wrote, there is a big difference in techniques involved and basic technology and its applications from the U.S. to developing nations.

Being a university student (31 responses):

Being respected as a human being and being treated without discrimination concerned many respondents in this area. "Academic segregation" apparently does exist and was seen as a major problem. Cultural exchanges were suggested as a possible remedy. Furthermore, some frustration has resulted from contacts with some foreign students' advisors, because of their lack of personnel and/or understanding.

Again more understanding of the entire U.S. university system was desired, as well as more time to adjust to that system and more freedom to change within it.

Money and jobs (44 responses):

Inflation and immigration regulations were seen as the culprits in money and job problems. Immigration restrictions were judged to be unfair and the immigration officials to be unenlightened and arbitrary in wielding power by some respondents.

Inflation has made it necessary to obtain both financial aid and a job. Many students are married and have a family to support. Both the student and the spouse need to work but are unable to because of visa restrictions or unavailability of jobs. In addition, money sources from the home country have been interrupted at times, causing further money problems for the foreign students. Deferred payment of fees and reduction in non-resident tuitions were suggested as remedies.

A poignant remark came from one respondent: "Question: how to get enough money for air-ticket to visit home just one Christmas holiday during my course of study?" (This came from a young married man whose spouse remained in his home country.)

Local community life (21 responses):

Bias and hypocrisy toward foreign students are reiterated in this area. Respondents spoke of feeling victimized—by segregation, by hostility (caused by current problems in Iran), by fear of crime. The need is to be treated courteously. As one student wrote, "Generally, students and people understand and accept us . . . Government and institutions are the problem."

Money is also part of the problem. Medicine, medical care, and insurance are available but too expensive. The large deposits required for housing and utilities create hardships.

Housing needs (20 responses):

Availability of housing was seen as a major need. Housing needs to be close to campus to accommodate those without cars and inexpensive enough that students can manage it financially. In addition, discrimination in obtaining housing was a problem, because of racial reasons or having children.

Students felt they were taken advantage of in obtaining housing. Contracts and leases were not explained and were incredibly complicated. Legal assistance (free) could alleviate this problem.

Interpersonal relationships (14 responses):

Relationships with other foreign students were the easiest to attain. Apparently there a natural camaraderie exists. U.S. friends were slightly less attainable, especially as friends with whom one could become close.

Advisors and professors were judged to be sympathetic and understanding, but sometimes lacking appreciation of foreign student needs.

Before going home (22 responses):

Lots of questions arose about getting oneself and one's goods home by the cheapest means. Information about student rates and charter flights would be helpful, as would an increase in the book allowance to allow more books to go back. A booklet with this information would certainly help those students who are soon to return home.

The conversion problems of electrical appliances were a nuisance. Students would like to be able to buy electrical items with the voltage they need or at least get converters for them.

Anticipated conditions after returning home (18 responses):

Most needs in this category dealt with hopes and plans for the future. An often-expressed need was to have adequate equipment and personnel to equip a lab or research area properly. An additional hope was for ongoing communication through the student returning to the U.S. at intervals or U.S. professionals visiting the developing nations. It would also be helpful to know of organizations within the U.S. with which to maintain contact and receive information about progress and research in the field of study.

Goals on coming to the U.S. (28 responses):

Major goals to be achieved in the U.S. ranged from individual to worldwide. Individual goals included attaining emotional and intellectual maturation, learning self-discipline, being receptive to others' ideas regardless of color, race, or religion.

Many respondents held a world view of their U.S. experiences—to help U.S. nationals to understand my country, to use knowledge cross-culturally, to entice Americans to visit my country, to inform the U.S. of foreign politics, culture and prejudice, and to be able to discuss differing ideologies in a meaningful way.

English skills (30 responses):

Many students responded that they already knew English well before coming to the U.S. However, they could increase their skill in following different accents and learning American slang. Even more, skills are needed beyond the usual English as a foreign language courses—the basics of "writing papers, from research to typing, from punctuation to format." The need is for intermediate English courses not just the remedial courses.

English courses for foreign students (66 responses):

Most of the reasons for not taking English courses for foreign students dealt with having prior knowledge of the language. Many students felt they were sufficiently proficient in English by virtue of having taken English courses before, taking all high school courses in English, or English being the home country's official language. Several respondents thought practice was the best remedy for any problems, that listening and comprehension needed work, but not grammar.

Factors which prevent relationships with U.S. nationals (88 responses):

Although many foreign students indicated that they have good relationships with U.S. students, many more cited factors which prevented good relationships. Lack of time and being too busy with studies were factors which covered all groups, but basically reasons fell into two categories—"them" and "us."

"They (meaning U.S. students) were prejudiced against foreigners, uninformed about other countries, superior-acting, too individualistic in attitude, unwilling to make the effort, or generally friendly and polite but not willing to get close. The foreign students were unable to form relationships because they tended to stick together, were uninterested, didn't like the U.S. system, did not know American culture, or spoke accented English and didn't know American slang.

Orientation programs (90 responses):

The Washington International Center (Washington, D.C.) has evidently conducted many orientation programs for incoming foreign

students. In addition, student clubs, such as Arab Students Club, Chinese Student Club, and Malaysian Student Association were another source of orientation programs, as were ex-students, family, and friends. Lastly, U.S. embassies in the student's home country were mentioned by several students as the source of their orientation.

Reasons one might stay in the U.S. permanently (78 responses):

Many students responded with aspects which they liked about living in the U.S.—"good education and good country", better future, personal and professional achievement, advanced society, opportunities. Many just "like it" here. Family considerations were also important. If the children or family wanted to stay, if the student's parents came over here, or if death occurred in the family at home, the student would be more likely to stay here. Religion was mentioned as a factor several times. Several students also feared problems in readapting to their home environment and social conditions.

Extra responses (93 responses):

Many of the respondents wrote notes on the questionnaires which provided interesting and lively reading. The most common perhaps was thanking us for our interest and hoping that some help for foreign students would result. Apparently the questionnaire items tapped into wells of feeling because many students almost literally wrote us books of information on their needs and desires.

As might be expected there were complaints about the research methods employed: the questionnaire was too long, answers were modelled, answers needed more flexibility, some items were unnecessary while other crucial questions were missed.

Suggestions were also made:

1) Each foreign student should spend 1-2 hours per day with a U.S. student.
2) U.S. students should receive similar questionnaires to determine their attitudes toward foreign students.
3) Results of this study should be made available to foreign student advisors.
4) Foreign student advisors or representatives should visit the ex-students in their home country. Dialogue between hosts and guests could be helpful.
5) U.S. government or universities should intervene with the home country on behalf of foreign students, especially to get them more money.

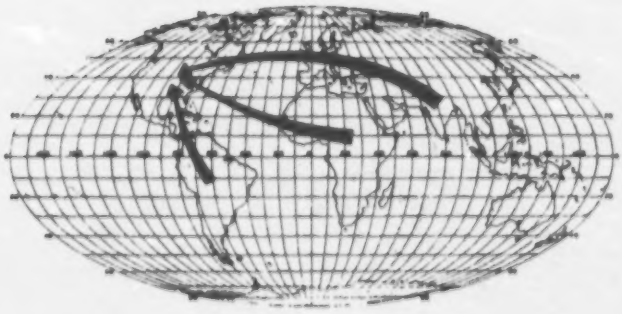
APPENDIX B:

QUESTIONNAIRE

A Study to Assess the Needs
of Foreign Students

What do you need?

Wherever you come from, we are interested in your opinion.



Principal Investigator:

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This study is sponsored by the National Association for Foreign Student Affairs (NAFSA).

Confidential
Please do not write your name.

We would like to find out what foreign students need so that U.S. universities and local communities can make necessary adjustments to make the study here more pleasant to foreign students.

You will need about *half an hour* to complete this questionnaire. Your assistance will be of great value to us. *Please complete the questionnaire now and simply put it in a nearby mail box. No postage needed.* By helping us, you will be helping students from your country and other countries who are yet to come. Thank you for your participation in this survey.

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I. The following list (Items 109 - 155) includes the type of information you might have wanted to know *when you first came* to the U.S. Please read each item and answer *both A and B* as shown by the example. (Note: If the item does not apply to you please skip it.)

	A. **Circle one number** to indicate how important it was for you to know the item, when you first came to the U.S.							B. **Circle one number** to indicate how satisfied you are with your knowledge of the item **now.**						
	Very important	Quite important	Somewhat important	Neither important nor unimportant	Somewhat important	Quite important	Very important	Very unsatisfied	Quite unsatisfied	Somewhat unsatisfied	Neither satisfied nor unsatisfied	Somewhat satisfied	Quite satisfied	Very satisfied
Example:														
The locations of the bookstores.	1	2	3	4	(5)	6	7	1	2	3	4	5	6	(7)
Information about														
109. The registration procedure.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
111. The procedure to begin your degree program.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
113. Examination requirements and regulations for a degree.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
115. English language requirements.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
117. English courses for foreign students.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
119. The efficient use of the library.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
121. The role of the academic advisor.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
123. The role of the major professor.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
125. The role of the foreign student advisor.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
127. The cost of travelling in the U.S.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

Information about . . .	A. **Circle one number** to indicate how important it was for you to know the item.							B. **Circle one number** to indicate how satisfied you are with your knowledge of the item now.						
	Very unimportant			Neither important nor unimportant			Very important	Very unsatisfied			Neither satisfied nor unsatisfied			Very satisfied
129. How much it costs to live here.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
131. Housing facilities.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
133. Housing cost.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
135. Community services available to foreign students and their families.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
137. Recreational activities available on campus.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
141. Availability of food and spices you are accustomed to using.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
143. Health services available.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
145. Health insurance available.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
147. Clothes needed.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
149. Ways of doing things in the U.S.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
151. Dating behavior with U.S. nationals of the opposite sex.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
153. Immigration and visa regulations.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
155. Information on sponsors' rules about families, medical care, and travelling.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

Other things you need to know (please specify):

II. The following is a list of needs you may have during your stay in the U.S. Please read each item and then answer **A and B.** (Note: if the item does not apply to you, please skip it.)

A. Circle one number to indicate how important the need is to you.

B. Circle one number to indicate how much the need is satisfied in your case.

The degree program in the U.S.

Need for . . .	A. Very unimportant			A. Neither important nor unimportant			A. Very important	B. Very unsatisfied			B. Neither satisfied nor unsatisfied			B. Very satisfied
157. Having an academic advisor assigned to you before your arrival.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
159. Receiving credit for academic work done outside the U.S.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
161. Sharing responsibility in planning your degree program with your academic advisor.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
163. Substituting certain requirements with alternative courses more relevant to your country.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
165. Having your academic advisor available when needed.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
167. Having faculty members spend enough time with you.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
169. Having faculty members with international experiences to guide you.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
171. Having an experience as a teaching assistant.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
173. Having an experience as a research assistant.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
175. Opportunities to do some team-work with American students.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
177. Having another student to help you with your study.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	A. **Circle one number** to indicate how important the need is to you.							B. **Circle one number** to indicate how much the need is satisfied in your case.						
	Very unimportant			Neither important nor unimportant			Very important	Very unsatisfied			Neither satisfied nor unsatisfied			Very satisfied
Need for . . .														
179. Having the sponsoring agency accept necessary adjustments in your degree program.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
209. Coordination between the sponsoring agency and the university.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
211. Economic contributions of foreign governments to U.S. unviersities in order to finance special programs for foreign students.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														
Relevancy of the U.S. degree program														
Need for . . .														
213. A program relevant to your future job in your country.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
215. A program relevant to the present needs of your country.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
217. Level of technology applicable to the future of your country.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
219. Obtaining basic knowledge in your area of study.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
221. Having international materials included in courses.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
223. Training to apply knowledge.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	A. **Circle one number** to indicate how important the need is to you.							B. **Circle one number** to indicate how much the need is satisfied in your case.						
	Very unimportant			Neither important nor unimportant			Very important	Very unsatisfied			Neither satisfied nor unsatisfied			Very satisfied
Relevancy of the U.S. degree program														
Need for . . .														
225. Training for leadership role.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
227. Training to introduce changes in your country.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
229. Thesis research in your country.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
231. Seminars with students from several departments to deal with problems of national development.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
233. Exchange of visiting professors between universities of your country and those in the U.S.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														
Extracurricular professional activities in the U.S.														
Need for . . .														
235. Opportunities to give information about your country in educational situations.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
237. Opportunities to attend off-campus professional meetings.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
239. Learning how universities provide assistance to local communities.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
241. Opportunities to put into practice what you learn in class.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
243. Work experience in your field before returning home.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														

Being a university student in the U.S.

Need for . . .	A. **Circle one number** to indicate how important the need is to you.							B. **Circle one number** to indicate how much the need is satisfied in your case.						
	Very unimportant			Neither important nor unimportant			Very important	Very unsatisfied			Neither satisfied nor unsatisfied			Very satisfied
245. Understanding the grading system.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
247. Understanding course requirements of instructors.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
249. Being able to take class notes well.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
251. Having extra time in taking exams to compensate for language difficulty.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
253. Having opportunities to discuss course work with U.S. students.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
255. Opportunities to discuss course work with faculty members.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
257. Getting adequate advice from your academic advisor.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
259. Getting adequate advice from your foreign student advisor.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
261. Being treated as fairly as U.S. students by faculty members.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
263. Being respected as a fellow human being by U.S. students.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
265. Having publications in your area of study from your country available in the university library.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
267. Having magazines and newspapers from your country available in the university library.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	A. **Circle one number** to indicate how important the need is to you.							B. **Circle one number** to indicate how much the need is satisfied in your case.						
	Very unimportant			Neither important nor unimportant			Very important	Very unsatisfied			Neither satisfied nor unsatisfied			Very satisfied
Need for . . .														
269. Having an office space for each graduate student.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														
Money and jobs in the U.S.														
Need for . . .														
271. Having enough money for school.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
273. Having enough money for basic living expenses.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
275. Having enough money to receive necessary medical care.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
277. Having money for some recreational activities.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
309. Receiving money from your sponsor without delay.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
311. Getting help in banking.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
313. Getting help from Student Financial Aids.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
315. Finding a part-time job.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
317. Finding a part-time job at the university related to your degree program.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
319. Finding a job for your husband or wife.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
321. Getting a work permit for off campus jobs.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														

Local community life in the U.S.

Need for . . .	A. Circle one number to indicate how important the need is to you. (Very unimportant … Neither important nor unimportant … Very important)	B. Circle one number to indicate how much the need is satisfied in your case. (Very unsatisfied … Neither satisfied nor unsatisfied … Very satisfied)
323. Getting accustomed to U.S. food.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
325. Observing your religious practices.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
327. Being able to behave according to your values and beliefs.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
329. Having sufficient time for social and recreational activities.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
331. Feeling welcome by U.S. nationals in the local community.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
333. Having recreational activities with U.S. nationals.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
335. Visiting U.S. families.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
337. Having U.S. nationals correctly informed about your country.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
339. Having local people treat foreign students courteously.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
341. Social activities which will give you an opportunity to meet persons of the opposite sex.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
343. Obtaining medical care.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
347. Knowing income tax regulations.	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Other needs (please specify):		

	A. Circle one number to indicate how important the need is to you.							B. Circle one number to indicate how much the need is satisfied in your case.						
	Very unimportant			Neither important nor unimportant			Very important	Very unsatisfied			Neither satisfied nor unsatisfied			Very satisfied
Housing needs in the U.S.														
Need for . . .														
349. Having adequate housing facilities on campus.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
351. Having adequate housing facilities off campus.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
353. Obtaining necessary furniture at a reasonable cost.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
355. Borrowing necessary furniture.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
357. Getting housing you want without discrimination.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
359. Sharing housing with U.S. Nationals.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
361. Being informed about legal rights and duties when you sign a contract.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														
Family living in the U.S.														
Note: For only those who have their families with them. (Others: please go to Interpersonal relationships on page 10).														
Need for . . .														
363. Finding enough activities for your spouse (husband or wife).	1	2	3	4	5	6	7	1	2	3	4	5	6	7
365. English language training for your spouse at a reasonable cost.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	A. Circle one number to indicate how important the need is to you.							B. Circle one number to indicate how much the need is satisfied in your case.						
	Very unimportant			Neither important nor unimportant			Very important	Very unsatisfied			Neither satisfied nor unsatisfied			Very satisfied
Need for . . .														
367. Appropriate educational opportunities for your spouse.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
369. Social activities which include children.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
371. Finding appropriate child care.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
373. Finding appropriate educational opportunities for children.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
375. Getting to know U.S. neighbors.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														
Interpersonal relationships in the U.S.														
Need for . . .														
409. A good relationship with your advisor.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
411. Good relationships with the degree program committee members.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
413. Good relationships with course instructors.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
415. A good relationship with your foreign student advisor.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
417. Friendly treatment by other university staff members.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

	A. Circle one number to indicate how important the need is to you.							B. Circle one number to indicate how much the need is satisfied in your case.						
	Very unimportant			Neither important nor unimportant			Very important	Very unsatisfied			Neither satisfied nor unsatisfied			Very satisfied
Need for . . .														
419. U.S. friends.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
421. U.S. friends with whom you can discuss personal problems.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
423. Social activities with U.S. nationals.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
425. Friends from other countries.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														
Before going home														
Need for . . .														
427. Knowing how to send books and household items home.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
429. Knowing information, in advance, on tax clearance regulations, sailing permit, etc.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
431. Knowing the cheapest means of transportation to return home.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Other needs (please specify):														

III. Anticipated conditions after returning home

When you look ahead toward returning home, you might recognize certain needs in order for you to function properly as a professional in your field in your country. Please read each item and then answer A and B.

Need for . . .	A. Circle one number to indicate how important the need will be to you. (Very unimportant … Neither important nor unimportant … Very important)							B. Circle one number to indicate how much the need will be satisfied in your case. (Very unsatisfied … Neither satisfied nor unsatisfied … Very satisfied)						
433. Finding a job appropriate to your training.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
435. Adequate salary or wages.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
437. Finding appropriate housing.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
439. Having funds for research.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
441. Having facilities to use U.S. training in future jobs.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
443. Having resources to use U.S. training in future jobs.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
445. Receiving the latest professional materials in the field.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
447. Visiting outside your country at intervals to keep in contact with scholars in your field.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
449. Having scholars visit your country for professional consultations.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
451. Publishing in professional journals abroad.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
453. Publishing in professional journals in your country.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

Other needs (please specify):

IV. The following is a list of goals which you might have wished to achieve when you were leaving your home country for the U.S. Please answer A and B by **circling one number** for each item.

	A. How important was this goal before you came to this country?							B. How likely is it that you are going to achieve this goal?						
	Very unimportant			Neither important nor unimportant			Very important	Very unlikely			Neither likely nor unlikely			Very likely
455. Obtaining the degree.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
457. A broad education.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
459. Specialized skills and knowledge in your field.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
461. Developing research skills.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
463. Improving your command of English.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
465. Gaining practical experience in your field.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
467. Getting to know U.S. professionals in your field.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
469. Seeing different parts of the U.S.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
471. Learning about the U.S.	1	2	3	4	5	6	7	1	2	3	4	5	6	7
473. Broadening your view of the world.	1	2	3	4	5	6	7	1	2	3	4	5	6	7

Other goals (please specify):

V. The following is a list of English skills you may need. **Please answer A, B and C.**

English skills	A. **Circle one number** to show how important the skill is to you. (Very unimportant … Neither important nor unimportant … Very important)	B. **Circle one number** to show how good your English is in this skill. (Very poor … Neither poor nor good … Very good)	C. If you have taken English courses in the U.S., **circle one number** to show how well they helped to improve the skill. (Very poorly … Neither poorly nor well … Very well; No English courses taken)
509. Understanding spoken English.	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7 9
512. Giving an oral presentation in class.	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7 9
515. Reading (textbooks, journals, etc.).	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7 9
518. Writing papers and a thesis.	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7 9
521. Taking tests.	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7 9
524. Taking class notes.	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7 9
527. Participating in class discussions.	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7 9
530. Conversing with faculty members and other students.	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7 9
Other skills (please specify):			

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VI. Many universities offer English courses for foreign students. **Please answer A and B below.**

A. Have you taken any English courses for foreign students on campus? Please circle one number.

533. 1. Yes, (please go to VII.).

2. No (please answer B below).

B. Why have you not taken any English courses for foreign students? Please circle the number(s) applicable to you. (You may have more than one reason.)

534.1. I do not feel I need to improve my English.

535.2. I have no time to take them.

536.3. I have no money to take them.

537.4. I do not think they will improve my English.

538.5. I have schedule conflicts.

539.6. I plan to take them later.

540.7. There are no English courses for foreign students on this campus.

541.8. I was not required to take any of them.

Other reasons (please specify):

VII. Did you take TOEFL? If so, what was your score? Please circle one number.

542. 1. No, I did not. (Please go to Question VIII.)

Yes, I did. My score was:

3. 400-450
4. 451-500
5. 501-550
6. 551-600
7. Over 600.

VIII. **The following factors may prevent you from establishing good relationships with U.S. nationals. Please circle one number to indicate how much you think each factor is preventing you from having good relationships.**

	Not at all	A little	Somewhat	Much	Very Much
543. Your command of English	1	2	3	4	5
544. Your religious background	1	2	3	4	5
545. Your racial background	1	2	3	4	5
546. Your cultural background	1	2	3	4	5
547. Your political view	1	2	3	4	5
548. Your being a foreigner.	1	2	3	4	5
549. Your attitude toward others	1	2	3	4	5
550. Their attitude toward you.	1	2	3	4	5

Other factors (please specify):

IX. We would like to know how you rate the following, and how you think others would rate them. Please answer A, B and C below by circling one number for each item for each question. (If you are not at all sure, you may skip the item.)

	A. How do you rate them?					B. How do you think your friends in your country would rate them?					C. How do you think U.S. students would rate them?				
	Among the Lowest	Fairly low	Average	Fairly high	Among the highest	Among the lowest	Fairly low	Average	Fairly high	Among the highest	Among the lowest	Fairly low	Average	Fairly high	Among the highest
551. 1. Your academic performance.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
554. 2. Your intelligence.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

		Among the Lowest	Fairly low	Average	Fairly high	Among the highest	Among the lowest	Fairly low	Average	Fairly high	Among the highest	Among the lowest	Fairly low	Average	Fairly high	Among the highest
557. 3.	Your physical appearance.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
560. 4.	Prestige (status) of your country in the world.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5

X. What was your age on your last birthday?

563. ( ) years.

XI. What is your sex? **Circle one number.**

565. 1. Female 2. Male

XII. **Please circle one number** to identify your home country. Due to the limited space the list includes only those countries with large numbers of students in the U.S.

566. Africa

1.1 Nigeria
1.2 Ethiopia
1.3 Libya
1.4 Ghana
1.5 Egypt
1.6 Kenya
1.7 Sudan
1.8 Other (please specify):

South and East Asia

2.1 Taiwan
2.2 India
2.3 Korea
2.4 Thailand
2.5 Malaysia
2.6 Indonesia
2.7 Philippines
2.8 Pakistan
2.9 Other (please specify):

Southwest Asia

3.1 Iran
3.2 Lebanon
3.3 Israel
3.4 Jordan
3.5 Iraq
3.6 Other (please specify):

Latin America

4.1 Mexico
4.2 Venezuela
4.3 Brazil
4.5 Colombia
4.6 Chile
4.7 Panama
4.8 Peru
4.9 Other (please specify):

Europe

5.1 Portugal
5.2 Turkey
5.3 Other (please specify):

XIII. What is your marital status? **Circle one number.**

568. 1. Single
2. Married: The spouse is with me.
3. Married: The spouse is in my country.
4. Other

XIV. What is your present university classification? **Circle one number.**

569. 1. Freshman
2. Sophomore
3. Junior
4. Senior
6. Master's Student
6. Ph.D. Student
7. Special - Non degree student
8. Other (please specify):

XV. On the following list, identify your area of study. **Circle one number.**

570. 01. Agriculture and Natural Resources
02. Architecture and Environmental Design
03. Area Studies
04. Biological Sciences
05. Business and Management
06. Communications
07. Computer and Information Services
08. Education
09. Engineering
10. Fine and Applied Arts
11. Foreign Languages
12. Health Professions
13. Home Economics
14. Law
15. Letters
16. Library Science
17. Mathematics
18. Military Sciences
19. Physical Sciences
20. Psychology
21. Public Affairs and Services
22. Social Sciences
23. Theology

24. Interdisciplinary Studies
25. Undeclared
26. Double major (please specify):
27. Other (please specify):

XVI. **Please answer A and B below by circling the numbers applicable to you.**

A. Is 4.00 the maximum grade point average at the university you are attending now?

572. 1. Yes (please answer B)
2. No (please answer C)

B. My grade point average is . . .

573. 1. Between 0.00 and 2.44
2. Between 2.45 and 2.84
3. Between 2.85 and 3.24
4. Between 3.25 and 4.00

C. What is the maximum grade point average at the university you are attending now?

( )

What is your grade point average?

( )

XVII. **Please circle one number** to indicate where you live now.

574. 1. In a dormitory.
2. In married student housing.
3. In a room off campus without cooking privileges.
4. In a room off campus with cooking privileges.
5. In an apartment off campus.
6. In a trailer
7. Other (please specify):

XVIII. Whom do you live with? **Please circle one number.**

575. 1. U.S. family.
2. U.S. student(s).
3. Foreign student(s) from another country.
4. Student(s) from your country.

5. Your spouse (and children).
6. Alone.
7. Other (please specify):

XIX. What are the primary and secondary sources of your financial support now? Please circle one number for each source.

576.	Primary source	Secondary source
AID, LASPAU or AAI (AIFGRAD) scholarship	1	
Scholarship from your government	2	
Rockefeller or Ford scholarship	3	
Fulbright scholarship	4	4
University assistantship	5	5
Parents or relatives (gifts, loans)	6	6
Savings	7	7
Employment off campus	8	8
Employment on campus	9	9
Other sources (please specify):		

XX. Please circle the number(s) in the following table to indicate who organized the orientation programs you attended in your country and in the U.S.

	Home country government	Sponsor agency	The university	Another university	Other (specify below)	Did not attend
609. In your country:	1	2			5	6
613. In the U.S.		2	3	4	5	6

Other organizers:

XXI. How long have you been in the United States? Please enter the **total months** of stay if this is not the first time you have been in the U.S.

618. ( ) **months**

XXII. How long have you been at this university? Please enter the **total months.**

620. ( ) **months**

How many foreign countries besides the U.S. have you visited and/or lived in?

622. ( ) countries.

How many **months** in total were you in those countries?

624. ( ) **months.**

XXIV. How likely is it that you might remain permanently in the U.S.? Please circle one number.

626. 1. Definitely not
2. Very unlikely
3. Somewhat unlikely
4. Undecided
5. Somewhat likely
6. Very likely
7. Definitely will.

XXV. Which of the following might make you stay permanently in the U.S.? Please circle the number(s) applicable to you.

627. 1. Political conflict at home.
628. 2. Not being able to find a job at home.
629. 3. A good job offer in the U.S.
630. 4. Marriage to a U.S. citizen.
631. 5. Family members' advice.
6. Other situations (please specify):
632. 7. Nothing would make me stay permanently in the U.S.

XXVI. Are you trying to find a job in your country now? Please circle one number.

633. 1. Yes, I am.
2. No, I am not. But I plan to do so.
3. No, I am not. I have not made any plans about finding a job.
4. No, I am not, because I have a job waiting for me.

XXVII. Have you registered with the Home Country Employment Registry of NAFSA (the National Association for Foreign Student Affairs)? Please circle one number.

634. 1. Yes, I have.
2. No, I have not but I am aware of it, and I intend to register.
3. No, I have not. I have a job waiting for me in my country.
4. No, I have not. I know about it, but I will not register with it because (please specify):

5. No, I have not. I do not know about it. (Please see your foreign student advisor, if you would like to know about it.)

635.

— THANK YOU VERY MUCH —

Please do not write your name on this questionnaire.

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P-624

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